Zimin Institute for Smart & Sustainable Cities
https://zimin-institute.asu.edu

3rd Annual Funding Cycle
Proposer’s Meeting
January 7, 2022
The Zimin Foundation [https://www.ziminfoundation.org](https://www.ziminfoundation.org) is a non-for-profit organization established by the Zimin Family with the aim to support education and science.

Historically the Zimin Family focused its philanthropic activities on Russia operating through the Dmitry Zimin Dynasty Foundation. The Zimin Foundation continues those activities to some extent. However, The Zimin Foundation does not limit itself geographically to Russia and extends its activities to different countries.

*Est. February 2019*
Zimin Institute at ASU

Driving People-Centric Smart Cities of the Future

VISION

A world where the rich functionality and power of advanced technologies are seamlessly integrated with the physical spaces where people live, work, learn and play to make them safer and more secure, healthier, more sustainable and resilient, and more personally enriching.
Zimin Institute for Smart Cities **Mission**
*Initiate, Catalyze, Connect, Nurture, Leverage, Grow & Engage*

**Realizing the Vision**

- **Engage** community and stakeholders to ensure that new solutions deliver genuine and profound social and public value
- **Grow** the Smart Cities entrepreneurial ecosystem: *venture funding → startups → new revolutionary products*
- **Leverage** ASU / local testbeds and innovative regional Smart Cities initiatives, collaboratives and funding $ streams
- **Identify** and target promising transformative technology solutions in the people-centric Smart Cities application space
- **Connect** researchers across disparate disciplines and application spaces to catalyze new synergistic collaborations
- **Fund** $ critical-stage cutting edge research to break barriers and advance nascent technology solutions
- **Engage** community and stakeholders to ensure that new solutions deliver genuine and profound social and public value
Zimin Institute at ASU

Center for Smart Cities and Regions

Leverage innovation to create urban and regional futures

Why ASU?

NSF Research Traineeship (NRT):
Citizen-Centered Smart Cities and Smart Living

Shaping tomorrow, today

ASU Smart Challenge
Addressing regional issues with collaboration and technology.

Submit a challenge

Our planet is under increasing distress. We must use our knowledge to act now.

A University-Industry partnership between Arizona State University and The KAITeki Institute (of Mitsubishi Chemical Holdings Corporation) for the sustainable well being of People, Society, and our Planet Earth.

Submit a challenge you believe will build smarter communities in the Phoenix metropolitan area by using digital cloud technology to solve pressing community and regional challenges.
We are embedded in a region committed to embrace new impactful solutions

The Connective | A Greater Phoenix Smart Region Consortium

Who We Are

The Connective is a collaborative research and implementation partnership between public sector, academia, industry, and civic institutions to drive the creation, advancement, and adoption of smart city technology on a regional scale, to improve the quality of life for all citizens and businesses within our communities.

Greater PHX Communities
- Maricopa County
- Apache Junction
- Avondale
- Buckeye
- Casa Grande
- Chandler
- El Mirage
- Fountain Hills
- Gila Bend
- Gilbert
- Glendale
- Goodyear
- Maricopa
- Mesa
- Peoria
- Phoenix
- Queen Creek
- Scottsdale
- Surprise
- Tempe
- Tolleson
- Wickenburg
- Youngtown

Partnerships

Compliments of Di Bowman
Institute Funding Intent & Project Types

Deploy seed and bridge funding to speed solution development and path to practical realization → positive societal impact

WANTED: compelling new ideas for which conventional funding is difficult to secure from existing agencies and sponsors who might say:

“Too undefined”  “Too risky”  “Too applied”  “Way too applied”
**Institute Priority Themes**  
**3rd Cohort RFP**

| 1. Daily Life & Human Connection / Interaction / Engagement ★ |  
| 2. Sustainable and Healthy Environments & Spaces ★ |  
| 3. Inherent Security, Safety & Public Well-being ★ |  
| 4. Infrastructure Surety, Resilience, and Integrated Functionality ★ |  

**NOTE:**  
- Thematic categories are meant to be evocative and inclusive, not restrictive  
- Cross-cutting ideas and proposals are welcome
Zimin Institute Active Projects

Cohort I

✓ Passive Radiative Heat Pump Surfaces for Urban Cooling: From Laboratory to Field Testing
  David Sailor w/ City of Tempe & 3M

✓ Storytelling Robots to Assist Older Adults with Dementia and Their Caregivers
  Troy McDaniel w/ Mirabella, Misty Robotics, Alzheimer’s Association

✓ Observing human-scale urban air pollution and temperature using sensor-embedded light-rail public transportation
  Mikhail Chester w/ Valley Metro

✓ Treated Waste Plastics: A Solution for Enhancing Performance of Concrete Construction
  Christian Hoover

Cohort II

• A data-driven approach for water safety plans in sustainable buildings to predict and prevent disease
  Kerry Hamilton w/ ASU FacMan

• Softlight: Chemical-free technology for removing water hardness
  Paul Westerhoff

• Reducing the Urban Heat Island Effect with Infrared-Reflective Photovoltaic Panels
  Arthur Onno

• Enhancing Pedestrian Safety in the City of Phoenix Using Machine Learning & AI
  David King w/ City of Phoenix & Sensagrate
Proposal Articulation: NABC

**Need**
Important stakeholder needs addressed? “Pain points”? Size of potential impact / market? “Key insights” that motivate timeliness and urgency of the project -- Why Now?

**Benefits**
Principal tangible and intangible benefits for all stakeholders? Quantify when possible.

**Approach**
Describe your compelling solution for the specific need. How great an improvement over current state? How are Project leader / team uniquely qualified? R&D plan with Milestones? { *Bring-it-to-life: sketch, mockup or storyboard* }

**Competition**
Articulate competing alternatives – why is your solution better? What is your team’s competitive advantage over other groups and entities? Any “golden nuggets”?
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<thead>
<tr>
<th><strong>Need</strong></th>
<th><strong>Benefits</strong></th>
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**Approach**

*Bring-it-to-life:* provide a sketch, schematic figure or story-board to help convey your vision and the uniqueness of your approach.

**Competition / Alternatives / Competitive Advantage**

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Zimin Institute for Smart & Sustainable Cities

Proposal Title: [See RFP p. 2]

Project Type: [See RFP p. 1]

Project Director and key team members:

Project Theme(s): [See RFP p. 1]

**Project Director Contact info:** PD@asu.edu 480-...

**Funding amount requested:** $...

Project Director Contact info: PD@asu.edu 480-....
### Proposal and Funding Timeline

**Two-stage selection Process**

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>December 15</td>
<td>RFP release</td>
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<tr>
<td>January 7</td>
<td>Proposer’s Meeting</td>
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<tr>
<td>March 4</td>
<td>Proposals due 5:00 PM MST through <a href="#">InfoReady</a> → integrated proposal document (pdf or Word) &amp; quad chart (ppt)</td>
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<tr>
<td>March 25</td>
<td>Finalists notified, with constructive feedback provided from the Institute’s Technical Advisory Board (TAB) and Director</td>
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<tr>
<td>March 28&lt;sup&gt;th&lt;/sup&gt; week</td>
<td>Finalists present to the TAB and Director</td>
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<tr>
<td>April 4&lt;sup&gt;th&lt;/sup&gt; week</td>
<td>Funding recommendations made to Institute’s Executive Advisory Board (EAB) for final action</td>
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<tr>
<td>April 16</td>
<td>Award decisions announced</td>
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<td>~ May 16</td>
<td>Funded accounts established</td>
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Characteristics of competitive proposals

- High alignment with RFP articulated focus theme(s)
- Show high promise for transformative impact on city inhabitants’ quality of life (healthy, meaningful, joyful, rewarding)
- Define innovative approaches and methods that embody R&D of the highest quality
- Embrace a cross- or trans-disciplinary approach and team, with appropriate inclusion of the social sciences, design and other relevant expertise and partners to ensure solutions are explored and developed in a comprehensive societal context
- Identify paths for follow-on funding and transition to real-world application
- Request funding level and budget that is consistent with scope, scale, tasks and deliverables
Zimin Institute Success Metrics

- New compelling Smart City technology solutions created and deployed with positive impact realized
- New effective collaborations established (internal & external)
- Follow-on funding (all sources -- federal, industry, foundation, private)
- New IP: disclosures, applications, granted patents
- New startup / spinout companies
- IP licenses
- High quality / high impact publications
- High-profile publicity -- trade journals, WSJ, NYT, etc.
Q & A
Thank you!

Director Greg Raupp
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Project Manager Lisa Irimata
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