



## Applicant Guidelines

# RISE Coastal Community Resilience Challenges Urban Mobility Resilience Challenge

### Challenge Partners

City of Norfolk  
City of Virginia Beach  
City of Miami  
City of Houston  
Sentara Healthcare  
Children's Hospital of The King's Daughters  
The Port of Virginia  
Old Dominion University  
Virginia Institute of Marine Science  
Esri  
Waze

*RISE thanks its Challenge partners for their technical expertise and guidance.*

## About RISE

RISE is a non-profit, economic development organization with a mission to accelerate innovation and business growth around solutions to coastal communities' resilience challenges. RISE leverages local assets and global networks to enable businesses to develop, demonstrate and scale innovations that help coastal communities adapt to changing climate. RISE achieves this by running Coastal Community Resilience Challenges and offering funding and other resources from its Resilience Innovation Fund, Resilience Innovation Accelerator and Resilience Innovation Hub & Testbed.

## Coastal Community Resilience Challenges

RISE Coastal Community Resilience Challenges accelerate innovation by connecting problems in need of better solutions to innovators with new resilience-building technologies, products and services. RISE surfaces Challenges from diverse entities operating in coastal environments and sources innovators through global networks. Each Challenge has an actual occurrence in the Hampton Roads region of southeastern Virginia and is applicable to other coastal areas. RISE provides applicants access to data and regional subject matter experts for each Challenge.

## Resilience Innovation Fund

RISE offers nearly \$4 million in non-equity, non-dilutive funding from its Resilience Innovation Fund (RIF) to innovators with resilience solutions that create substantial new value, can be demonstrated in the Hampton Roads region of Southeastern Virginia, are scalable to other coastal regions, and can be built into sustainable businesses. The RIF is seeded with funds from the U.S. Department of Housing and the Commonwealth of Virginia.

## Resilience Innovation Accelerator

RISE accelerates the growth of businesses offering innovative solutions to coastal resilience challenges. The Accelerator works with awardees of the RISE Coastal Community Resilience Challenges to help businesses maximize the impact of the Resilience Innovation Fund and become sustainable after the RISE funding. The Accelerator offers a 3-month Innovation Commercialization Assistance Program (ICAP) based on the National Science Foundation's I-Corps techniques tailored to the resilience sector.

## Resilience Innovation Hub & Testbed

RISE brokers access to Hampton Roads resources to businesses in need of testing and demonstrating coastal resilience-building innovations. RISE facilitates access to real-world pilot sites and permits, co-working office and workshop space, data and key stakeholders, entrepreneurial community, PR opportunities, and regulatory technical assistance.

# Urban Mobility Resilience Challenge

## Challenge Timeline\*

June 1, 2020 2:00 pm EDT	Application submission deadline for Stage 1 of the Urban Mobility Resilience Challenge.
*Dates and times TBD	Webinars
July 10, 2020	Finalists announced and invited to Stage 2 of the Urban Mobility Resilience Challenge. The finalists will receive up to \$30,000 each from the Resilience Innovation Fund. They will also gain access to the Resilience Innovation Accelerator and resources from the Resilience Innovation Hub.
September 25, 2020	Deadline for Stage 2 submission (finalists only).
October 12-16, 2020	Finalists in-person pitch presentations to the Selection Committee in Norfolk, Virginia.
October 28, 2020	Winner(s) announced. Winner(s) will receive up to \$300,000 for real world implementation and demonstration. Launch of project(s) implementation.
March 31, 2022	Deadline for project(s) implementation and contract closeout

\*All dates are subject to change by RISE

## Application Technical Assistance

During the application period, RISE staff is available to answer general questions about the application and provide general subject matter technical assistance to all applicants. Technical assistance is limited to the application and process, and staff is unable to provide direct assistance in completing the application.

In order to answer applicants' RISE will be holding a series of webinars. These webinars will be open to anyone and attendance or non-attendance does not affect entrants' chances of success. Dates for the webinars will be posted on the RISE website.

## Challenge Objective

The RISE Urban Mobility Resilience Challenge seeks solutions to bring automated real-time flooding information to mobile apps and route guidance platforms. Guidance must be available to private drivers, commercial vehicles, emergency vehicles, and public transportation.

RISE will provide funding to small business-led teams to demonstrate real-time flooding guidance apps in Hampton Roads. Solutions proven successful in this region must also apply to other coastal cities and communities. Hampton Roads has proven to be well-suited as a demonstration testbed. In addition, credit will be given to solutions that have more uses and applications than just route guidance.

Although Waze is used as the demonstration platform in this Challenge, entrants should keep in mind that their solutions must be platform agnostic and readily integrated with other route guidance applications.

## Description of the Problem

During flooding events, communities often experience significant disruptions to transportation. These disruptions affect private, commercial, and emergency vehicles as well as public transportation, detracting from local business' viability and the quality of life of residents. Also, many coastal communities are home to significant private/public installations which are economic drivers in the communities. These organizations rely on the transportation infrastructure of the host cities to function, and disruptions to their functionality cause hardship to them and to the community. A large part of the difficulty in managing this issue is the lack of awareness of the location and severity of the flooding, and how to navigate around the hazards.

The advent of mapping and routing platforms for smartphones (e.g., Waze, Google Maps, Apple Maps, etc.), could provide drivers guidance around such hazards in real-time. However, automatically conveying temporally and spatially changing flood hazards to such applications for their route guidance systems in real-time is complex and has not yet been demonstrated.

## Challenge Structure Overview

The Challenge will take place in three stages:

### Stage 1

In Stage 1, teams will build software applications utilizing their own funding and resources to identify roadway flooding from tidal and rain flooding. Using data sets provided by RISE, they will automatically generate GeoJSON reports of flood hazards and road closures. Teams will submit a file containing these reports for a specific flooding event from the entrants' algorithms in issuing hazard and closure reports as well as a document describing the business model for developing a business around this capability.

### Stage 2

**Up to 5 Finalists** will be selected from these submissions. RISE, at its sole discretion, will fund up to 5 Finalists no more than \$30,000 each: \$10,000 for their submission datasets; \$10,000 for their participation in the RISE Innovation Accelerator and associated deliverables (if they choose to participate); and \$10,000 for access to their real-time data feed to demonstrate their system ingesting real-time tidal (and other) data to provide a feed of flooding threats and flood-caused road closure reports to traffic guidance apps.

## Stage 3

At least one Winner will be selected from Finalists, at the sole discretion of RISE, to implement and demonstrate a real-time version which, if proven effective, will be made accessible to the general public in Hampton Roads. The Winner will be funded up to \$300,000 to implement and run a demonstration pilot. The demonstration will be overseen by city and industry experts with the participation of major stakeholders. The successful Winner(s) may have a significant advantage in the market for this capability nationally and globally.

The following describes the Stages in greater detail.

## Stage 1 Process

In Stage 1, teams will build software applications, utilizing their own funding and resources, to identify roadway flooding. Using data sets provided by RISE, they will automatically generate GeoJSON reports of flood hazards and road closures. Teams will submit a file containing these reports from the entrants' algorithms. Entrants will also submit the business plan to show how their company will be able to grow with this capability.

### Development Test Data

Entrants will build develop their hazard identification algorithms and software using the following data sets (all datasets can be downloaded from the Urban Mobility Resilience Challenge website under Datasets):

#### *Roadways:*

RISE will provide a GIS map of roadways of the entire Hampton Roads region including all attributes required for the reports. This map should be used to generate hazard warning and road closure messages for routing apps.

#### *Tidal and Rain Flooding Data:*

Flooding hazards on roads are caused by tidal surges and rainfall. Tidal flooding is mapped by combining topographic elevation maps with predicted tidal levels. However, the effects of rainfall on flooding are less easily predicted. Rain coverage on top of tidal flooding can be complicated by the stormwater system limitations. In addition, highly localized microbursts or "rainbombs" can create intense flooding over a small area very quickly. When combined with tidal flooding, the resulting flooding distribution can be hard to predict, and can also present a major hazard to vehicular traffic particularly for underpasses<sup>1</sup>.

RISE will provide access to StormSense flood map data. Entrants must use the StormSense<sup>2</sup> datasets in order for the judges to be able to compare solutions (in order to select the finalists). Entrants are welcome to use other data sources in addition to StormSense for Stage 1. Entrants are encouraged to consider other data sources in addition to StormSense (see Business Plan and Stages 2 and 3 requirements).

In Stage 1, RISE has identified two historic flooding events:

- Hurricane Hermine (September 3, 2016, 1500 - 1800 UTC)
- Hurricane Matthew (October 9, 2016, 0500 - 0800 UTC)

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<sup>1</sup> Note that for Stage 1 algorithms and software **do not** need to account for underpass flooding.

<sup>2</sup> Reference at <https://doi.org/10.3390/jmse7080242>

Entrants should download the data for these dates and times from the Challenge website under Datasets. During Stage 1, entrants are to use the Development Test Data (see above) to build algorithms and software that:

1. Ingest the Development Test Data over the period of interest
2. Overlay the flooding and roadways, roadway segments, intersections, etc.
3. Identify:
  - a. Areas where the roadway water level is between 1 and up to 6 inches.
  - b. Areas where roadway lane flooding is 6 inches or greater.
4. Follow and automate protocol in Waze road closure tool<sup>3</sup> to build Waze Road Closure messages where roadway lane flooding is greater than 6 inches.
5. Build the GeoJSON reports. Reports should follow the JSON report profile format presented in the “Waze Incident Information”<sup>4</sup> and “Waze Road Closure Information”<sup>5</sup> documents.

This process must be performed over the whole period of interest for each event with updates being produced at least every 15 minutes (entrants may choose a shorter period if they wish). Incident and Road Closure Reports will be textual reports and must follow the Waze schema.

RISE will provide entrants with a data file for another flooding event (other than Hurricane Hermine and Matthew) to be used for the submission. This data will be provided one week before the submission deadline. Entrants must submit a file of all the reports generated in this period. Judges will review the reports. These reports must be automatically generated by the team's software algorithms. No manual intervention by the entrants will be permitted.

**All Incident and Closure reports must contain:** a unique three letter identifier used for all reports that refers to the entrant's team, a unique six-digit identifying number, and end with the word `_HAZARD` or `_CLOSURE`. For example: ABC123456\_HAZARD

Although no sensor data is being provided as part of this Challenge, teams must consider the possibility of sensor and additional input sources of data when building and structuring their software, providing the "hooks" for additional data inputs in the future.

After Finalist selection, in Stage 2 and thereafter, entrants may choose any data sources which give them the best solution (in their opinion and based on our judging criteria). RISE will not prescribe or direct entrants as to which flooding, weather, sensor, or other data sets to use or how to use them. Entrants may use proprietary and/or non-proprietary data they wish, however, if there is a cost to the data it must be reflected in the business plan. Several tidal and rain data sources will be provided on the Challenge website under Datasets.

## Submission

Stage 1 submissions will be due by Wednesday, June 1, 2020, 2:00pm EST.

In Stage 1, teams will build software applications, utilizing their own funding and resources, to identify roadway flooding from tidal and rain flooding. Using data sets provided by RISE, they will automatically generate GeoJSON

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<sup>3</sup> Download “Waze Road Closure Tool” from the Challenge website under Datasets.

<sup>4</sup> Download “Waze Incident Information” from the Challenge website under Datasets.

<sup>5</sup> Download “Waze Road Closure Information” from the Challenge website under Datasets.

reports of flood hazards and road closures. Teams will submit a file containing these reports from the entrants' algorithms in issuing hazard and closure reports. Entrants will also complete an application form and submit the business plan demonstrating what is going to sustain and grow the business once the RISE project is complete. If the applicant feels that their solution has particular performance that you wish to emphasize to the judges (e.g., enhanced road closure capability, enhanced spatial resolution of hazards, predictive capabilities, etc.), please provide a write-up (5 pages maximum) describing the performance expected, and if this performance can be seen in the data from the provided final flood dataset and the time of occurrence(s). The report can be uploaded in Question 9 of the application form. Please do not provide proprietary information.

Clearly a major focus of this Challenge is the development of the flood avoidance guidance capability described above. However, in order to enhance entrants' business sustainability, and to maximize potential revenues, entrants should consider multiple users and uses of their capability. For example, entrants may consider:

- how can the entrants' solution be used for improving evacuations?
- how can historic reports be used for city planning and design purposes?
- how can revenues be generated reduced vehicle losses due to flooding?

These are just some examples, and entrants will get credit for novel applications and uses.

The business plan should include:

- 1) A statement of the problem(s) you are solving, and a description of your solution
- 2) A description of the business model(s) and size of the market(s)
- 3) 3-year financial projections of revenues and expenses
- 4) Marketing plan for the solution
- 5) Plan and schedule for the overall business plan
- 6) Major milestones for the solution beyond RIF award
- 7) Description of partnerships with other organizations and individuals
- 8) Team resumes
- 9) Description of the market for the solution, customers, and beneficiaries
- 10) Anticipated market penetration at the end of 2021, 2022 and 2023
- 11) Alternatives to the applicant's solution that are currently available in the market
- 12) Description of active competitors delivering a similar solution
- 13) Value of the applicant's solution to the buyer(s) and rationale for why a buyer would purchase
- 14) A description of obstacles that may be encountered when trying to enter the market with this product/service
- 15) A description of intellectual property (IP) protection
- 16) Other key information that is needed to understand the market for the solution and how the team will capitalize on the solution.

The Business Plan should be a maximum of 15 pages.

## Webinars

In order to answer entrants' questions and update entrants on new information, RISE will be holding a series of webinars. Topics to be discussed in these webinars are:

- initial development process

- submission & selection process
- RISE Innovation Accelerator
- Finalists selection
- real-time system development
- judging and Winner selection
- final test data
- other questions

These webinars will be open to anyone and attendance or non-attendance does not affect entrants' chances of success. Dates for the webinars will be posted on the RISE website.

### Finalist Selection Criteria

Up to 5 Finalists will be selected from the Stage 1 submissions based on the following criteria:

1. Incident and Closure reports will be assessed based on:
  - Accuracy of the spatial and temporal extents, as well as reported water depth of the flooded roadways
  - Ability to predict affected areas
  - Limited Type 1 and 2 errors

The performance of the algorithms will constitute 60% of the total score.

2. The business plan will be scored based on:
  - Strength of entrepreneurs & management team
  - Size of the market and revenue opportunity
  - Strength of competitive environment
  - Marketing, sales and partners
  - Viability and scalability of the business model

The business plan will constitute 40% of the total score.

The judging committee is made up of professionals and technical experts from local governments, business, and academia.

### Stage 2 Process and Award

**Up to five Finalists** will be selected, at the sole discretion of RISE, at the end of Stage 1. In Stage 2, over the period of 2 months the 5 Finalists will:

1. Receive \$10,000 upon selection for the final submitted dataset (output of the algorithm) for the prescribed historic storm events.
2. Receive access to the RISE Resilience Innovation Accelerator. This 2-month virtual program will give the Finalists access to business mentors to refine and enhance business models. Entrants are not required to take part in the Accelerator at their own discretion and they will not be penalized for not taking part. Teams that do take part will receive an additional stipend of \$10,000 in total paid in installments after successful completion of each of the Accelerator's three phases and associated deliverables. Finalists not taking part in the Accelerator will not receive the additional \$10,000 funding.
3. Review/amend their business plan based on findings in the Accelerator.



4. Build and demonstrate a real-time version of their algorithms and software, utilizing their own funding and resources. The purpose of this is twofold: 1) to monitor and assess the system availability (network and data) and finalist's response to outages, and 2) demonstration by way of real-time generation of incident and closure reports based on current environmental conditions. Both these factors will be technical performance metrics that will be judged at the end of Stage 2. In order to be a useful test in Stage 2, Finalists' will be required to have their real-time system up and running by August 10, 2020. Finalists will be allowed to make changes to their systems after this date and should notify RISE if they are taking their system down so any outage will not be penalized. Each finalist will receive \$10,000 for access to the real-time incident and closure report feed. RISE is not funding development of the software and algorithms. RISE will only pay the Finalist for a deliverable consisting of the output from a real-time version of algorithms and software. RISE will perform the assessment of network and data availability.
5. Receive access to the Resilience Innovation Hub resources including access to co-working office space, datasets, stakeholders, and regulatory technical assistance. The Finalists will get access to representatives from various city departments (including outside of Hampton Roads) and major regional stakeholders such as hospitals, port, military installations and others to provide guidance on their needs and value propositions.

## Submission

Stage 2 submissions (finalists only) will be due by September 25, 2020, 2:00 pm EDT.

In Stage 2, Finalists will build and demonstrate a real-time version of their algorithms and software. RISE will perform an availability (network and data) analysis on each system. The teams will also submit their refined business plan. Detailed submission guidelines and application form will be posted on the Challenge website upon the conclusion of Stage 1.

## Winner Selection Criteria

Submissions will undergo an eligibility and regulatory review and will be evaluated based on the following criteria and weighting:

1. System performance will be assessed based on:
  - System (network and data) availability based on assessment by RISE.
  - Accuracy of the spatial and temporal extent of Incident and Closure reports, as well as reported water depth of the flooded roadways
  - Ability to predict affected areas
  - Limited Type 1 and 2 errors

The system performance will constitute 30% of the total score.

2. The business plan will be scored based on:
  - Strength of entrepreneurs & management team
  - Size of the market and revenue opportunity
  - Strength of competitive environment
  - Marketing, sales and partners
  - Viability and scalability of the business model

The business plan will constitute 70% of the total score.

Each Finalist have a 1½ hour meeting with the RISE Investment Committee to present results and their refined business plan, as well as the finalist’s plan for the real-time evaluation. The Finalists will submit a presentation in advance and have 30 minutes to present, with an additional 1 hour for questions from the Committee. Presentations take place in person in Norfolk, Virginia. As part of the pitch invitation, the Finalists will receive questions from the Investment Committee in advance to aid their preparation.

The Investment Committee will assess the presentations and RIF application as a complete package and make award recommendations to the RISE Executive Director. The Investment Committee is made up of professionals from local governments, hospitals, ports, insurance sector and investment community.

### Stage 3 Process and Award

At least one winning Finalist (Winner) will be selected, at the sole discretion of RISE, although RISE reserves the right to select more than one Winner, as well as to not select any Winner. The Winner(s) will implement and execute an evaluation of a real-time version of their system which, **if proven effective**, will be made accessible to the general public in Hampton Roads. RISE will appoint a System Assessment Committee (SAC) consisting of people with working knowledge of (but not limited to) city operations, traffic flow, and flooding. The SAC will be the responsible party for assessing the Winner’s solution(s) and proposing a public evaluation.

On being selected, the Winner(s) will establish a Statement of Work and Budget with RISE to perform tasks. The Winner(s) will be funded up to \$300,000 from the Resilience Innovation Fund to set up and execute an evaluation program for its system consisting of:

1. Establishing a real-time feed of Incident and Road Closure reports for Waze (and other applications as available) through the cities' Connected Communities Program (CCP), including delivery of the reports in real-time to appropriate personnel/servers, etc. The Winner will be responsible to maintain this feed, its operation, and for addressing any errors, malfunctions, and outages that may occur. This performance will be part of the overall assessment.
2. Establishing the ability to view incidents and closures in real-time. The SAC will assess the performance in operation during good weather and during rain/tidal flooding events.
3. Real-life verification of flooding reports and closures by being on site and documenting the flooding effects.
4. In conjunction with the SAC, develop a plan for the real-time evaluation consisting of:
  - a. Developing a phased roll out of real-time public version
  - b. Establishing protocols for a real-time public evaluation
  - c. PR to get public awareness of the evaluation
  - d. Developing a website for feedback from SAC, the public and other users of the real-time system
  - e. making the real-time system live and support it for the duration of the evaluation
  - f. consolidating feedback and sharing with SAC.

The exact funding amount will be contingent upon a review of reasonableness, necessity, and eligibility of all costs in the Statement of Work and Budget prior to execution of the contract. RISE will not pay for any enhancements or developments to the submitted software generating the reports.

The real-time public release of the system for public evaluation will only go ahead with the agreement of the SAC. The SAC must be confident that the system will not endanger the public nor impede operations of the cities. In

Stage 3 a feedback process will be put in place wherein the SAC will give feedback to the Winner. Feedback will be given at two levels:

- Level I: Changes that the SAC has decided **must** be made to the software before it can go to a public release. Changes will be made at the Winner's discretion and expense. RISE will not fund these changes. If the Winner chooses not to make these changes, no public release will be made under the RISE funded program and funds allocated to the public release will not be spent.
- Level II: These would be suggestions relating to the preferences of SAC members. No changes are required in order to proceed to a public release but may be made at Winner's discretion and expense. RISE will not fund any changes.

## Ownership of Intellectual Property

Funding awards received, if at all, by Challenge Finalists and Winner(s) shall not be used for development of software applications and are not intended by RISE to be for the purchase of property or services from Challenge Finalists and Winner(s). RISE will award funds to Challenge Finalists and Winner(s), if at all, for the outputs achieved by their software applications, for successful completion of the RISE Resilience Innovation Accelerator and, in case of Winners, to set up and execute an evaluation program. RISE does not intend, by virtue of funding distributed to Challenge Finalists and Winner(s), to acquire rights in or to the software applications developed by Challenge Finalists and Winner(s).

Subject to the applicability of the provisions of 37 CFR Part 401, 2 CFR 200 and the National Disaster Resilience Competition Grant Agreement (#16-NDR-02), RISE shall obtain no right, title, or interest in or to the software applications developed by Challenge Finalists and Winner(s).

## Application Eligibility

Anyone can submit a solution to the Urban Mobility Resilience Challenge but only small businesses (including small business-led teams) will be eligible for funding and resources from the Resilience Innovation Fund, Accelerator and Hub.

## Funding Eligibility

To be eligible for funding from Resilience Innovation Fund and other resources from Resilience Innovation Hub, applicants must meet the following criteria:

- Must be selected as one of the Challenge finalists (up to 5 finalists will be selected from Stage 1)
- Finalist must be (or become prior to receiving funds) a small business, as defined by the U.S. Small Business Administration defined by SBA and found under [13 CFR Section 121.201](#);
- Business must be registered on sam.gov, have a DUNS number (steps for DUNS and sam.gov registration are available in Appendix A).
- Must be eligible to receive funds from the United States government and adhere to applicable administrative requirements as outlined in 2 CFR §200 (please note that RISE provides extensive assistance to the teams throughout the entire project to meet these requirement);

- Must be able to demonstrate the proposed solution in the Hampton Roads region of Southeastern Virginia (for more details see Geography Eligibility).

Please note that applicants are not required to be a business and have a DUNS number and Sam.gov registration (both necessary for non-debarment verification) by the Stage 1 application submission deadline. However, Challenge finalists selected from Stage 1 must be a small business and provide a DUNS number as well as sam.gov registration prior to receiving any funds from RISE in Stage 2.

The DUNS number can be typically received within a week. The SAM.gov registration can take 4-6 weeks to receive, and applicants are strongly encouraged to begin this registration as soon as possible. There are no charges for either DUNS or SAM.gov registrations.

## Geography Eligibility

Applicants must demonstrate that the proposed solution may be implemented in or directly benefit the Hampton Roads region of Southeastern Virginia. If an applicant is not located in the Hampton Roads region, the winning solution must be deployed, installed, tested or otherwise demonstrated in the region.

RISE can only select projects that provide a demonstrable economic and resilience benefit to the Hampton Roads region defined as: The City of Chesapeake; The City of Franklin; The City of Hampton; The City of Newport News; The City of Norfolk; The City of Poquoson; The City of Portsmouth; The City of Suffolk; The City of Virginia Beach; The City of Williamsburg; The Town of Smithfield; Gloucester County; Isle of Wight County; James City County; Southampton County; Surry County; and York County.

## Eligible Uses and Eligible Solution Costs

The RISE Resilience Innovation Fund (RIF) is funded with Community Development Block Grant funds and matching funds from the Commonwealth of Virginia, resulting from the National Disaster Competition (CDBG-NDR) led by the US Housing and Urban Development (HUD). Based on the requirements of these funds, the following uses are examples of RIF eligible funding uses. These activities must enhance the resilience of coastal communities.

- Purchase of fixed assets, working capital, salaries, and technical assistance to businesses,
- Prototype, planning, drafts, versions, and proof-of-concept development created prior to a final product,
- Installation and testing of prototype, or installation of pilots on publicly-owned property
- Recruitment and educational activities,
- Creation of plans, reports, or similar deliverables aimed at providing lessons learned, guidance, and best practices,
- Acquisition or rental of machinery, equipment or services if integral to the proposed project, program or plan,
- Administrative costs related to servicing or ensuring compliance with RIF requirements,
- Payments for salaries and support of staff or the contracting of an outside entity to implement any part of the project, program, or a plan,
- Provisions of technical assistance to businesses, such as preparation of financial packages, survey, engineering, legal, architectural or other similar assistance if integral to the proposed project, program, or plan,

- Expenses related to business recruitment, marketing, promotional activities, and related administrative expenses, including, but not limited to, salaries, travel, office expenses, advertising, legal and related costs

RISE reserves the right to consider items not included in the eligible cost list eligible at their discretion, provided those costs are consistent with the RISE mission and support economic development in the Hampton Roads region. All costs proposed shall be necessary and reasonable to deliver the solution. All costs are subject to the approval of eligibility and cost reasonableness, as determined by RISE. RISE may review any proposed costs and provide an eligibility determination to an applicant.

## Ineligible Costs

The following costs are ineligible. Applicants may include these costs in solution budgets, so long as there is another source of funding which is responsible for covering the costs.

Pre-award costs	Costs incurred prior to the execution of the contract with RISE including the development of the CCC and RIF applications, prototypes, plans, or other work required to secure RIF funds, are not eligible for RIF funding.
Patents, copyrights and related legal fees	RIF funds cannot be used for the advancement of patents or copyrights of the solution, whether costs are incurred by applicant personnel, partners, vendors or contractors.
Single and multi-family residential projects	RIF funds cannot be used to provide new or rehabilitated housing units. However, solutions that are applied to residential properties or development, such as a prototype for a new mitigation method, may be considered for funding.
Debt payments	The refinancing or payment of existing debt, including secured and non-secured debt capital or interest payments are not an eligible use of RIF funds.
Penalty payments	The payment of governmental fines or penalties arising from late or improper payment of occupational taxes and fees, sales tax, income tax, or other penalties are not an eligible use of RIF funds.
Political or religious activities	All funded activities must be secular and apolitical in nature.
Buybacks	RIF funds may not be used to buy out current stockholders, equity holders, or any family members with vested interest in the applicant business or entity.
Investment instruments	RIF funds may be used to purchase investment instruments if required for the implementation or development of a program or plan. However, purchasing items for the sole purpose of increased return on investment or increased revenue alone is not allowable.
Buildings for the general conduct of government	Except to the extent necessary to fund the rehabilitation or reconstruction of public buildings, building or portions thereof, used for the general conduct of government cannot be assisted with these funds.

General government expenses	Expenses required to carry out the regular responsibilities of local government are not eligible for assistance.
Purchase of Equipment	The purchase of construction equipment is ineligible, but compensation for the use of such equipment through leasing or depreciations is allowed. In addition, the purchase of equipment, fixtures, motor vehicles, furnishings, or other personal property not an integral structural fixture is generally ineligible.
Operating and maintenance expenses	Any expense associated with repairing, operating or maintaining public facilities, improvements and services is ineligible.
Income Payments	These funds may not be used to pay individuals or families for items such as food, clothing, housing, or utilities, withstanding emergency grant payments.
Private property	Costs associated with improvements to private property are ineligible under the RISE program.

## Resilience Innovation Fund

### Award Terms and Conditions

Payments made to the winner(s) are made on a reimbursement basis for eligible costs. The exact funding amount will be contingent upon a review of reasonableness, necessity, and eligibility of all costs in the Statement of Work and Budget prior to execution of the contract. The awardee(s) must incur costs and request reimbursement for eligible expenses. RISE will work with the awardee(s) to create a reimbursement schedule that is tied to deliverables and milestones. Reimbursements will be issued only for eligible expenses that are supported by the appropriate documentation and are directly linked to a project milestone. At a maximum, the awardee(s) will be able to request reimbursement twice a month. Funds must be fully expended and closeout by March 31, 2022.

Awardee(s) are required to meet the terms of the grant agreement. If the beneficiary does not meet the agreed upon deliverables, a portion of the entirety of the award must be repaid. RISE will determine a repayment plan on a case-by-case basis, with all repayments due by April 2022.

RISE requires its funded awardees to repay all or a portion of their award for the following reasons:

- Failure to abide by the terms and conditions set forth in the award Agreement;
- Failure to achieve successful completion of the activity funded by the award;
- Failure to follow any federal, state, or local laws, regulations, and requirements.

## Resilience Innovation Accelerator

Finalists will receive feedback from the Investment Committee that may recommend participation in the RISE Resilience Innovation Accelerator. This 2-month, virtual program will give the finalists access to business mentors to refine and enhance business models. The Accelerator will assist the Finalists with addressing Investment Committee concerns and recommendations. The finalists are not required to take part in the Accelerator at their own discretion and they will not be penalized for not taking part. Teams that do take part will receive an additional stipend of \$10,000 paid in three installments after successful completion each of the Accelerator's three phases and associated deliverables.

The Accelerator offers the Innovation Commercialization Assistance Program (ICAP) based on the National Science Foundation's I-Corps techniques tailored to the resilience sector. The goal is to increase the likelihood of the businesses becoming sustainable and attracting private capital and/or first customers after the RISE's RIF award.

## Resilience Innovation Hub

In addition to funding and business assistance through the Resilience Innovation Accelerator, the Finalists and Winner(s) will gain access to a suite of Resilience Innovation Hub resources free of charge for a duration of their contract with RISE, including:

- Co-working office space
- Fabrication, assembly and testing space in a warehouse/workshop space
- RISE assistance with securing real world pilot sites in one or multiple Hampton Roads cities
- Datasets
- Experts from Hampton Roads local governments and other coastal cities, as well as other regional stakeholders (e.g. Port of Virginia, Hospitals, Universities, etc.)
- Hampton Roads entrepreneurial community and programing
- PR opportunities and media visibility
- Regulatory/compliance technical assistance and assistance with various permitting

## No Requirement of Award; Non-commitment

Notwithstanding any other provision of this document to the contrary, this Urban Mobility Resilience Challenge does not commit RISE to award any funding to any applicant, Finalist or Winner. RISE reserves the right to reject any and all applications or any portions thereof, at any time, and to cancel this Urban Mobility Resilience Challenge and to request new applications under a new Challenge or other vehicle.

## Award Appeals Process

Applicants are notified by email regarding the results of their application. Applicants who are not selected for funding can appeal their determination. Applicants must make appeals within 15 days after receipt of the notification. Appeals must be received in writing and include supporting documentation to justify a change in status. RISE will notify the appealing applicant when an appeal is received.

All appeals are reviewed in the order in which they are received by the Chief Strategy Officer of RISE. The Chief Strategy Officer makes an appeal determination and forwards to the Executive Director for confirmation and approval. The results of the appeal are provided to the applicant by email within 30 days of appeal acceptance.

### *Award amount appeals*

Applicants selected for funding can appeal the awarded amount of funding. Appeals for awarded amounts must include sufficient documentation to revise an award offer, such as:

- Updated financial statements;
- Newly identified private funds, loans, or equity;
- Updated cost estimates; and/or,
- Revised scopes and deliverables.

The award appeal process does not allow for substantial revisions of applications and appeals that substantially alter the original proposal are not accepted.

Appeals of the amount of loan funds awarded may require a revised underwriting analysis. The underwriting analysis may adjust the review timeframe for appeal determinations beyond the standard 30-day window. Before a revised underwriting review occurs, the Chief Strategy Officer makes an initial determination on the merit of the appeal to prevent duplicative efforts from the underwriting team.

Following approval from the Chief Strategy Officer, the Executive Director, and a satisfactory underwriting review, if applicable, the applicant is offered of a revised award amount.

### *Board appeals*

Applicants who have had their appeal denied for award amount or participation in RIF may direct their appeal to the RISE Board of Directors. Appeals to the Board must contain a detailed rationale justifying the reversal of the Chief Strategy Officer's decision.

Appeals to the Board must be made in writing within 10 days of receipt of the appeal determination from RISE. The Board reviews appeals during their regularly scheduled quarterly board meetings and documents appeal decisions made in meeting minutes. Appeal determinations are made when most of the Board reaches a decision regarding the appeal. The results of the appeal are provided to the applicant by standard mail and email. Decisions reached by the Board are final.

## Monitoring and Oversight

RISE monitors each funded applicant throughout the lifetime of their grant. Monitoring serves to identify risks and deficiencies early in the process, so that any issues may be remedied at the outset. In general, the levels of monitoring range from desk auditing, to on-site monitoring, to integrity monitoring. Any risks and deficiencies identified result in a request for timely corrective action from the entity being monitored. RISE provides Technical Assistance (TA) to all entities being monitored in order to facilitate compliance with all applicable federal, State, and local regulations.



## Key Regulations

RISE is funded with a Community Development Block Grant from HUD's National Disaster Resilience Competition and matching funds from the Commonwealth of Virginia. All programs that RISE implements adhere to HUD CDBG-NDR regulations.

RISE and its funded applicants must adhere to all applicable State and federal laws, rules, and regulations. This section provides a summary of the significant and applicable federal regulations for the RIF awards. RISE provides extensive regulatory and compliance technical assistance to its awardees during the entire period of their projects.

## Procurement requirements

Funded applicants will be required to follow 2 CFR 200.318-326. RIF awards must be expended in compliance with 2 CFR 200, which outlines cost principles, and procurement standards. All costs are subject to the approval of eligibility and cost reasonableness, as outlined in [2 CFR 200.404](#)

Where applicable, the requirements set forth at 2 CFR Part 200 will apply to the procurement, selection, and contract requirements of any participating consultant, vendor, or contractor that engages with the applicant in the course of expended grant and/or loan funds.

## Cross-cutting requirements

### *Americans with Disabilities Act (ADA)*

RISE takes affirmative steps to ensure that qualified persons with disabilities are informed of the availability of program services and activities, and RISE's programs or services are readily accessible to, and usable by, individuals with disabilities. RISE will also ensure that handicapped persons are provided with benefits and services as those provided to non-handicapped individuals; And will ensure that all programs and activities are accessible, both structurally and administratively, to handicapped and disabled persons. The types of reasonable accommodations that can be provided include accommodations or adjustments to a rule, policy, practice, or service.

### *Davis-Bacon Act and Related Acts (DBRA)*

Construction projects over \$2,000 must comply with Davis Bacon Act and Related Acts. The [Davis-Bacon Act and Related Acts \(DBRA\)](#) requires all contractors and subcontractors funded whole or in part with CDBG-DR financial assistance through the RISE in excess of \$2,000 to pay their laborers and mechanics employed under the contract no less than the locally prevailing wages and fringe benefits for corresponding work on similar projects in the area. In some cases, Commonwealth of Virginia Prevailing Wage Law is in effect. In these cases, the higher prevailing wage rate between the federal and State must be adhered to and made applicable. For prime contracts in excess of \$100,000, contractors and subcontractors must also, under the provisions of the Contract Work Hours and Safety Standards Act, as amended, pay laborers and mechanics, including guards and watchmen, at least one and one-half times their regular pay for all hours worked over 40 in a work week.

Additionally, RISE must follow the reporting requirements per the United States Department of Housing and Urban Development (HUD) and Department of Labor (DOL) regulations. This requirement also extends to RISE's funded applicants and contractors.

The Monitoring and Compliance Department (MCD) ensures that RISE's applicable programs and services are in compliance with DBRA through the submission of weekly payrolls as well as interviews with laborers. RISE utilizes

its Davis-Bacon FTP Submission website and electronic tracking system to both track and monitor weekly payroll submissions by contractors.

#### *Equal Employment Opportunity*

[Executive Order 11246](#), Equal Employment Opportunity, as Amended, prohibits federal contractors and federally-assisted construction contractors and subcontractors, who do over \$10,000 in Government business in one year from discriminating in employment decisions on the basis of race, color, religion, sex, sexual orientation, gender identity or national origin. The Executive Order also requires Government contractors to take affirmative action to ensure that equal opportunity is provided in all aspects of their employment. This regulation is adhered to within RISE programs.

#### *Fair Housing*

The [Fair Housing Act](#) requires all grantees, sub-recipients, and/or developers funded in whole or in part with HUD financial assistance to certify that no person was excluded from participation in, denied the benefit of, or subjected to discrimination in any housing program or activity because of their age, race, color, creed, religion, familial status, national origin, sexual orientation, military status, sex, disability or marital status. RISE enforces the Fair Housing Act by ensuring that all grantees, sub-recipients, and/or developers meet the applicable Fair Housing and Affirmative Marketing requirements and provide a marketing plan and report on compliance in accordance with the Fair Housing Act and the associated forms on HCR's website, where applicable. The Affirmative Marketing Plan must be in compliance with applicable Fair Housing Laws and demonstrate how the Applicant will affirmatively further fair housing throughout applicable RISE disaster recovery programs.

#### *Fair Labor Standards Act of 1938, as Amended (FLSA)*

The [Fair Labor Standards Act of 1938](#) (FLSA) establishes the basic minimum wage levels for all work and requires the payment of overtime at the rate of at least one and one-half times the basic hourly rate of pay for hours worked in excess of 40 per week.<sup>5</sup> These labor standards are applicable to the entire construction contract whether or not CDBG-DR funds finance only a portion of the project. Excluding the exceptions listed below, all workers employed by contractors or subcontractors in the performance of construction work financed in whole or in part with assistance received under RISE CDBG-DR program must be paid wages at rates not less than those prevailing on similar construction in the Locality as determined by the Secretary of Labor in accordance with the Davis-Bacon Act, as amended. In some cases, Commonwealth of Virginia Prevailing Wages and Davis-Bacon Prevailing Wages both apply. In such instances, the higher of the two prevails.

Exceptions to Fair Labor Standards Act of 1938, as Amended (FLSA) include:

- Construction contracts of \$2,000 or less;
- Real property acquisition;
- Architectural and engineering fees;
- Other services (such as legal, accounting, construction management);
- Other non-construction items (such as furniture, business licenses, real estate taxes);
- Rehabilitation of residential property designed for fewer than eight families; and,
- Demolition and/or clearance activities, unless related to construction (demolition and clearance as independent functions are not considered construction). Contact a RISE CDBG-DR Labor Specialist for assistance.

### *Limited English Proficiency (LEP)*

Federal Executive Order 131661 and State Executive Order #26 require RISE and all satellite offices, programs, subrecipient, contractors, subcontractors, and/or developers funded whole or in part with CDBG-DR financial assistance to ensure fair and meaningful access to programs and services for families and individuals with LEP and/or Deaf/Hard of Hearing. RISE ensures fair access through the implementation of a Language Assistance Plan (LAP) which includes non-English based outreach, translation services of vital documents, free language assistance services, and staff training. RISE's LEP Coordinator is responsible for coordinating all activities associated with the LAP, and the (MCD) monitors its implementation. Refer to the "Language Assistance Plan" Provision of Language Assistance Services for additional guidance and protocols. Refer to the "Language Assistance Plan" Provision of Language Assistance Services for additional guidance and protocols.

### *Minority/Women-Owned Business Enterprises (MWBE)*

The federal [Executive Order 12432](#) guidelines requires for selected federal agencies to promote and increase the utilization of Minority Business Enterprises. 24 CFR 85.36 requires grantees to ensure that all sub-recipients, contractors, sub-contractors, and/or developers funded in whole or in part with HUD CDBG-DR financial assistance to make a commitment or demonstrate an acceptable "good faith effort" toward ensuring that contracts and other economic opportunities are directed to small and minority firms, women's business enterprise, and labor surplus area firms. In addition, RISE ensures compliance by requiring sub-recipients, contractors, and/or developers to achieve an overall MWBE participation goal of 30 percent of the entire contract value, consisting of 15 percent for Minority-Owned Business Enterprises (MBE) and 15 percent for Women-Owned Business Enterprises (WBE). RISE verifies MWBE certification and monitors to ensure compliance with all reporting requirements.

### *Section 3*

Construction projects over \$100,000 must comply with Section 3 hiring regulations. Section 3 of the Housing and Urban Development Act of 1968 requires grantees, sub-recipients, contractors, sub-contractors, and/or developers funded in whole or in part by the CDBG-DR funding, to the greatest extent feasible, extend hiring opportunities and contracts to Section 3 eligible residents and businesses. Section 3 eligible residents are low- and very low- income persons, particularly those who live or reside in public or government assisted housing. For those entities that receive more than \$200,000 in HUD CDBG-DR assistance and contractors that are awarded covered contracts that exceed \$100,000, RISE requires that an approved Section 3 plan be in place before the project is awarded and approved. RISE's Monitoring and Compliance Team monitors contracts with, sub-recipients, contractors, subcontractors, and/or developers. RISE manages the education and outreach efforts, reviews the proposed Section 3 Plans, and provides Technical Assistance (TA) when needed.

## Appendix A

### General Instructions for Registering in DUNS/SAM.GOV

If you have not previously registered in **DUNS or SAM**, read all instructions below before you register in these systems.

#### Important Facts

1. All organization/entity information MUST BE IDENTICAL IN BOTH DUNS and SAM.
  - You cannot enter one address for DUNS and then a different address for SAM. This will cause a system error and result in significant delays.
  - You cannot have unequal spacing between words in the primary contact information fields. Be very precise when entering all data.
2. Certain internet browsers work better than others for navigating the SAM system. If you have technical difficulties read “Browser Settings for Optimal Use of SAM”:  
<https://inside.fws.gov/media/FinancialAssistance/Documents/Browser%20Use%20of%20SAM.pdf>
3. Obtaining a CAGE or NCAGE code is an important first step in this process.
4. For SAM Customer Service, contact:
  - Federal Service Desk: [www.fsd.gov](http://www.fsd.gov)
  - US Calls: 1-866-606-8220
  - International Calls: 334-206-7828
  - You may also contact your DIC point of contact
5. There is no registration fee for DUNS or SAM for any organization that is a financial assistance recipient of the US government, including contracts, grants, and cooperative agreements.
6. There are businesses that will assist in registration for a fee, but you are not required to make payment to any DUNS representatives for purposes of contracts, grants, or cooperative agreements.

#### SAM.GOV Instructions: Read prior to application

1. Go to [www.sam.gov](http://www.sam.gov)
2. Click on the “Help” Tab.
3. Click on the “FAQs” Tab, read the “SAM User Help” information.
4. Click on the “User Guides” tab, then the “Quick User Guides” tab below.
5. Read the “Quick Start Guide for Entities Interested in Being Eligible for Grants.”  
[https://www.sam.gov/sam/transcript/Quick\\_Guide\\_for\\_Grants\\_Registrations.pdf](https://www.sam.gov/sam/transcript/Quick_Guide_for_Grants_Registrations.pdf)

6. Click on “Full User Guide” and download full instructions for completing SAM registration. This guide contains step-by-step screen shots to assist in the registration process.
7. Also under the “User Guides” tab are “Demonstration Videos:”
  - SAM Overview Video
  - Register a New Entity in SAM to be Eligible for Grants and Other Federal Assistance
  - Migrating Your Legacy System Roles
8. For SAM frequently asked questions (FAQs), go to: <https://www.sam.gov/portal/public/SAM/>
9. Once you have read through the formal instructions on the SAM website, you can use the instructions below for basic reference when entering SAM organizational information.
10. If you are awaiting an assistance award from DIC, please email your Grant Specialist once you have completed SAM registration.

### Basic Instructions for completing SAM entry registration

1. First, complete DUNS registration for your organization. See below for DUNS information.
2. Click "Register New Entity" under "Manage Entity" on your "My SAM" page
3. Select your Entity type
4. Select "NO" to "Do you wish to bid on contracts?"
5. Select "YES" to "Do you want to be eligible for grants and other federal assistance?"
6. Complete "Core Data"
  - Validate your DUNS
  - Enter Business Information
  - Enter CAGE code if you have one. If not, one will be assigned to you after you have completed your registration. Non-domestic registrants must enter NCAGE code.
  - Enter General Information (business type, etc.)
  - Financial Info (EFT)
  - Proceedings detail
2. Complete "Point of Contact"
3. The entity's registration should be active in 3-5 business days (10 business days for manual validations.)