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Detroit: Transforming Freight Entrant Handbook

MAY 2024

Foreword

Movement is at the heart of every city

Welcome to the Sustainable Cities Challenge Detroit! This handbook will guide you as you prepare your entry. It lays out everything you need to know.

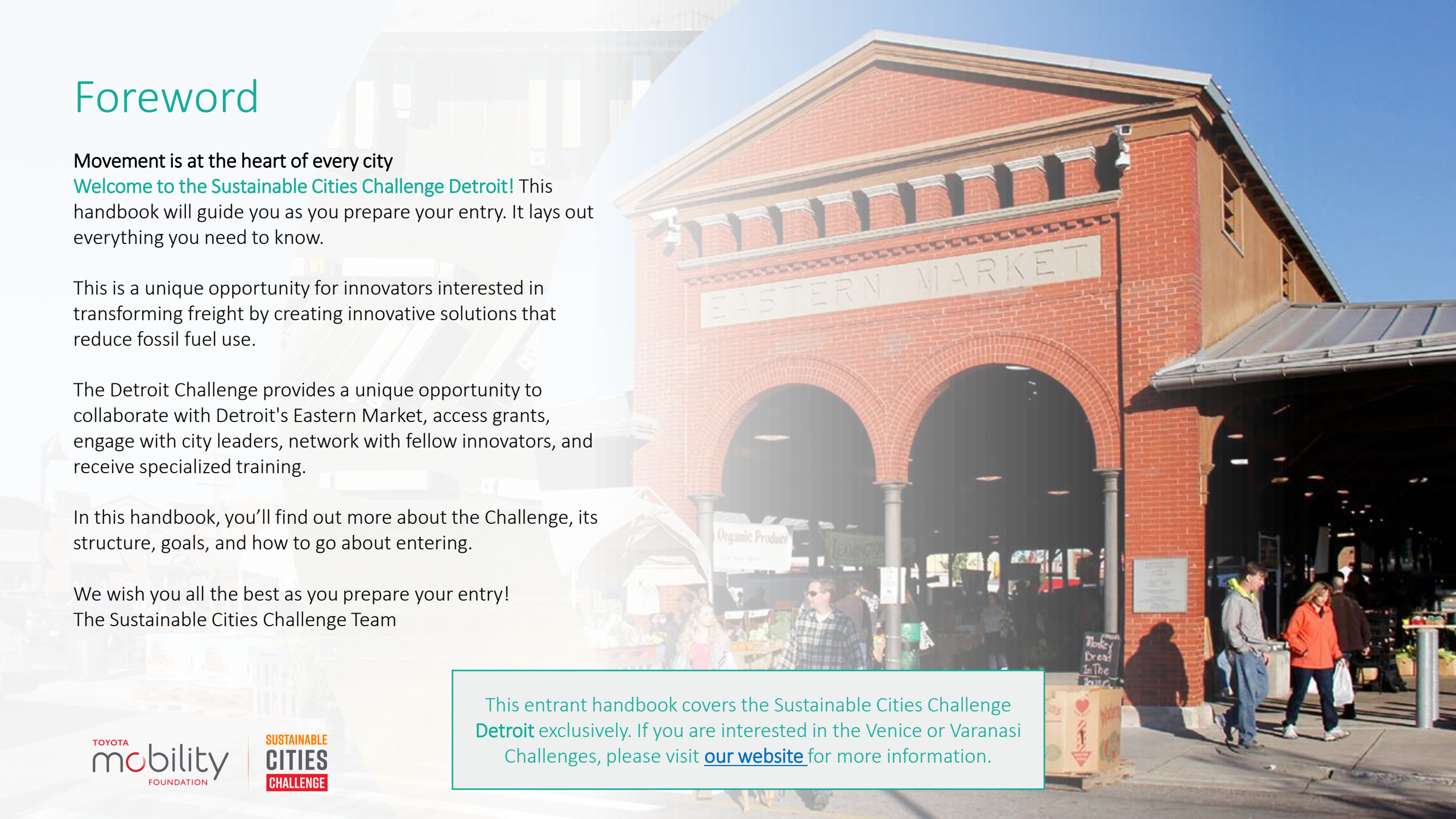
This is a unique opportunity for innovators interested in transforming freight by creating innovative solutions that reduce fossil fuel use.

The Detroit Challenge provides a unique opportunity to collaborate with Detroit's Eastern Market, access grants, engage with city leaders, network with fellow innovators, and receive specialized training.

In this handbook, you'll find out more about the Challenge, its structure, goals, and how to go about entering.

We wish you all the best as you prepare your entry!
The Sustainable Cities Challenge Team

This entrant handbook covers the Sustainable Cities Challenge **Detroit** exclusively. If you are interested in the Venice or Varanasi Challenges, please visit [our website](#) for more information.



Contents

This document, along with the [Frequently Asked Questions \(FAQs\)](#), [Terms & Conditions](#), and [Privacy Policy](#), will provide you with all the information you need to enter the Sustainable Cities Challenge Detroit.

Should you have any questions after reading this handbook, please feel free to contact the Sustainable Cities Challenge team at info@sustainablecitieschallenge.org.

You can also visit our website at: <https://sustainablecitieschallenge.org/detroit>

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1. Introduction

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1.1 Who Is Involved?



Toyota Mobility Foundation (TMF)
Funder & Lead Delivery Partner

TMF was established in August 2014 by the Toyota Motor Corporation (Toyota) to support the development of a more mobile society in which everyone can move freely. The Foundation underscores Toyota's ongoing commitment to continuous improvement and respect for people.

Find out more at toyotamobilityfoundation.org



The City of Detroit
Host City

The Office of Mobility Innovation (OMI) exists to help the City of Detroit navigate the rapidly changing transportation and mobility industries in partnership with the automotive industry to support clean and equitable mobility solutions. Transportation and mobility are essential for both people and businesses and Detroit's automotive heritage provides an unparalleled opportunity to work with industry to innovate and define their future.

Find out more at detroitmi.gov



Challenge Works
Delivery Partner

Challenge Works is a global leader in designing and delivering high-impact challenges that incentivize cutting-edge innovation for social good. Challenge Works is a social enterprise founded by the UK's innovation agency Nesta. They have run more than 86 prizes, distributed £124 million in funding, and engaged with more than 12,000 innovators.

Find out more at challengeworks.org



World Resources Institute (WRI)
Delivery Partner

World Resources Institute (WRI) is a global research organization that works with governments, businesses, multilateral institutions and civil society groups to develop practical solutions that improve people's lives and ensure nature can thrive.

Find out more at wri.org



89up
Public Relations & Marketing

89up was founded with a clear mission: to create a powerful integrated communications agency for the world's most important causes. 89up is now the global market leader in creating impact for NGOs.

Find out more at 89up.org

1.2 How to Use This Handbook

- This handbook aims to support anyone interested in entering the Challenge. It contains key information you will need to enter, including:
 - The background and objectives of the challenge.
 - The challenge structure and timeline.
 - Who can enter, and the entry process.
- You can read sections of this handbook independently, but we recommend that you read the entire handbook before you prepare your entry for the Challenge.
- In addition, you will need to read these two resources on our website before entering the Challenge:
 - [Frequently Asked Questions \(FAQs\)](#)
 - [The Terms and Conditions](#) of participating in the Challenge
 - [The Privacy Policy](#)

If you have read the handbook and the Frequently Asked Questions and have more questions, please contact the team at info@sustainablecitieschallenge.org.

This Entrant Handbook covers the Sustainable Cities Challenge **Detroit** exclusively. If you are interested in the Venice or Varanasi Challenges, please visit [our website](#) for more information.

2. About the Sustainable Cities Challenge Detroit

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2.1 The Problem

[Detroit's Eastern Market](#) is the largest historic public market district in the US. The market is Detroit's hub for food production, processing, packaging, and distribution, selling over \$360 million of wholesale food, and exporting almost twice as much to international markets. It organizes farmers, wholesalers, logistics operators, and distributors into distribution activities designed to move food that feeds millions.

Eastern Market is continuing to expand as a market and as a mixed-use neighborhood. A key challenge of its growth strategy is to harmonize food production and distribution increases with clean freight initiatives. This will safeguard the health of Eastern Market residents, workers, and visitors while reducing fuel costs of freight operators.

Detroit is seeking innovators who can demonstrate impact through solutions that achieve three key objectives. First, innovators must show that their solutions add value to the freight ecosystem. Secondly, they must demonstrate that their solutions can be integrated without adding significant costs. Finally, innovators must ensure that their solutions are easy to adopt and use by freight operators and Eastern Market.

Eastern Market's Wholesale Food Market

Detroit's Eastern Market includes a wholesale food market.

The wholesale market is a complex system with several key components:

- **Processes:** the transportation of food into, within, and out of the market, loading and unloading of goods, processing, packaging, refrigeration, buying and selling, backhauling, and more.
- **People:** drivers, freight brokers, warehouse staff/lumpers, food producers, fleet owners, merchants, customers, etc.
- **Vehicles:** trucks, tuggers, drayage vehicles, forklifts, reefers, etc.
- **Goods:** foods requiring refrigeration at various temperatures, foods requiring processing or packaging, bulk inventory, etc.

Impact

Emissions, noise, and particulate pollution are creating pressures for transformation.

These pressures affect the business environment for Eastern Market stakeholders, making it harder to operate against the backdrop of growing expectations for change.

However, this change is met with concerns due to potential disruptions to business operations in an already competitive market with thin margins. Solution providers struggle to build relationships in Eastern Market and understand local needs, thus hindering their ability to attract early adopters and to test and demonstrate new solutions.

2.2 Why do we need innovation?

- To promote innovation in Eastern Market, it is essential to cut operations' costs while also reducing the use of fossil fuels.
- Possible avenues for innovations include optimizing fleet, cargo, and cold chain management to finding alternative energy sources for powering fleets and cold chain logistics.
- Despite an emergence of novel sustainable technologies, they are not being adopted at a transformative rate in places like Eastern Market.
- Therefore, there is a need to innovate not only in technology but also in how innovative solutions reach early adopters. Creating more attractive and affordable offerings and opportunities to test and demonstrate solutions is crucial, allowing freight to adopt new solutions with minimum disruption.

What barriers have existed to innovation so far?

Key barriers to innovation have included social and economic concerns:

- **Socially:** Operators in places like Eastern Market need to trust that the innovative technologies or approaches have an impact while considering the benefits for businesses.
- **Economically,** concerns revolve around the bottom line and affordability of adopting and continuing to use novel solutions.

What could an open innovation challenge change?

An open innovation challenge provides an opportunity to explore many cutting-edge innovations simultaneously and test them to identify the best fit for Eastern Market community.

The first stage of the Challenge will allow innovators to engage Eastern Market stakeholders in a way that includes and will empower them in the decision-making process, exploring their needs, building relationships.

The second stage will foster partnerships with early adopters, offer support for testing and implementation costs to minimize disruptions, build trust, and generate opportunities to scale-up.

The final aim of the Challenge will be to select winners that can go on to implement their solution in Eastern Market.

2.3 Key Stakeholders

Below is a list of the stakeholders that will play a key role in the Detroit Challenge. These stakeholders may be involved in different capacities from being a source of information to providing networking and relationship-building opportunities.

From the launch of the Challenge until entries close in September, we may be including more stakeholders in the Challenge. **As such, please treat this page as live and check the website for the latest version of this document.**

Eastern Market Development Corporation

Eastern Market Development Corporation (EMDC) is a community-based non-profit development entity established to ensure that Eastern Market District remains an authentic and diverse place for all businesses, residents, and visitors. EMDC engages in commercial and mixed-use (mixed-income housing, retail, industrial) development projects in collaboration with private and philanthropic partners.

See pages 8 and 9 for an overview of how Eastern Market is involved in the Challenge.

2.4 Challenge Statement

The Challenge Statement is **our call to action to innovators**. It articulates the Challenge's aims and what we want entries to deliver, without predetermining what the solutions should look like. Semi-finalists, finalists and, eventually, our winners will be selected on the basis of how well they meet this Challenge Statement.

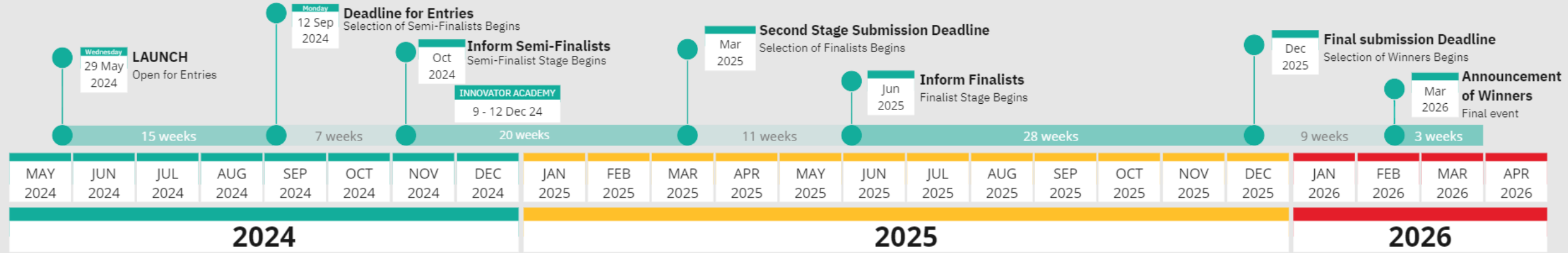
Demonstrate solutions that reduce fossil fuel use and cut costs of freight operations in Eastern Market.

Solutions should address one or more of the following:

- Reduce idling time
- Reduce partial loads and empty miles
- Reduce reliance on fossil fuel for cold chain logistics and freight management
- Reduce implementation costs and barriers to adopting clean freight technologies

2.5 Structure & Timeline

Below is an overview of the timeline and structure of the Sustainable Cities Challenge Detroit.



	Semi-Finalist Stage	Finalist Stage	Winners
WHO	Up to 10 semi-finalists	Up to 5 finalists	Up to 3 winners
WHEN	November 2024 to March 2025 Contracting: To participate in the Challenge, you will be expected to sign an innovator agreement within one week of receiving the agreement	June 2025 to December 2025	March 2026 onwards
WHAT	A grant of \$50,000 each Solution Development & Relationship Building	A grant of \$130,000 each Solution Demonstration & Refinement	\$1.5 million shared* Implementation of Solution

**The \$1.5 million winning grant will be shared among up to three winners. The exact allocation between winners will be determined during the selection of the winners.*

All funding must be used to develop, test, demonstrate, and implement your solution for Detroit’s Eastern Market.

The winners’ grant is an implementation grant that must also be used to implement the solution. As part of their final submission, each finalist must put forward ideas for what this implementation would look like for their particular solution, with input and discussion with TMF.

2.5 Structure & Timeline

Below is an outline of the key stages, as well as the financial support and non-financial support package that will be provided to participating innovators

	Semi-Finalist Stage	Finalist Stage	Winners
WHO	Up to 10 semi-finalists	Up to 5 finalists	Up to 3 winners
WHEN	November 2024 to March 2025 Contracting: To participate in the Challenge, you will be expected to sign an innovator agreement within one week of receiving the agreement	June 2025 to December 2025	March 2026 onwards
WHAT	<p>A grant of \$50,000 each</p> <p>Solution Development & Relationship Building</p> <p>If selected, you will need to attend an in-person Innovator Academy in Detroit from 9 – 12 December 2024.</p> <ul style="list-style-type: none"> Engagement events will be held to build relationships with Eastern Market businesses. Understand user needs and technical specifications of Eastern Market operations and collect baseline data. Off-site testing of potential solutions. Planning on-site demonstration pilots to be proposed in the next stage. A range of capacity-building support will be available to support you during this stage. 	<p>A grant of \$130,000 each</p> <p>Solution Demonstration & Refinement</p> <ul style="list-style-type: none"> On-site implementation and piloting of solutions. Continuing to engage with users to incorporate needs and technical specifications into solutions and collect data on effectiveness and impacts. During this phase, finalists will receive a range of capacity-building support based on their individual needs. 	<p>\$1.5 million shared</p> <p>Implementation of Solution</p> <ul style="list-style-type: none"> Implementation of solutions in Eastern Market, working with TMF and the City.
OUTCOME	<p>Semi-finalists will be required to submit a demonstration plan, where they:</p> <ul style="list-style-type: none"> Present progress and findings from the development of their solution. Outline plans and next steps for solution demonstration and refinement <p>We may also hold a pitching day where solutions are demonstrated in person – the details of this will be confirmed upon selection. Technical reviewers and judges will review and score achievements against the judging criteria and select the finalists.</p>	<p>Finalists will be required to submit an implementation plan, where they:</p> <ul style="list-style-type: none"> Present results from the demonstration Outline plans and next steps for implementation of the solution in Eastern Market (TMF and the City will be able to provide guidance on this during the Challenge). <p>Videos, pitches, or site visits where solutions are demonstrated may take place – the details of this will be confirmed upon selection. Technical reviewers and judges will review and score achievements against the judging criteria and select the winners.</p>	<p>Winning solutions are available to all Eastern Market Operators.</p>

2.6 Key Dates

The table below outlines the key milestones and corresponding dates for the Detroit Challenge. Entrants must ensure they are available to participate at every point in the Challenge.

Milestone	Dates
Challenge launch (open to receive entries)	Wednesday 29th May 2024
Entry deadline	12:00 EDT (16:00 UTC) on Thursday 12th September 2024
Up to 10 semi-finalists selected	Mid-September to Early November 2024
Semi-finalist stage Solution Development & Relationship Building	November 2024 to March 2025
Sign innovator agreement	Within one week of receiving the agreement
Innovator academy (in-person)	Monday 9th December 2024 – Thursday 12th December 2024
Semi-finalists submit demonstration plans	Mid-March 2025
Up to 5 finalists selected	June 2025
Finalist Stage Solution Demonstration & Refinement	June 2025 to December 2025
Finalists submit Implementation Plans	Early to Mid – December 2025
Up to 3 winners selected	Late December to Early March 2026
Public announcement	March 2026
Winners implement solutions	March 2026 onwards

3. Entering the Challenge

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3.1 Eligibility Criteria

The Eligibility Criteria articulates who can enter the Challenge and conditions they will need to meet to be eligible. If you do not meet the criteria below your entry to the Challenge will not be accepted.

- The solution must be tailored specifically for and implemented within the city of Detroit.
- Entrants can be single organizations or consortia.
- Teams that enter as a consortium must nominate one organization as the lead entrant. The lead entrant will enter into contracts and receive funding from the Toyota Mobility Foundation.
- Entrants must be established as a legally incorporated organization to enter.
- The challenge is open to innovators worldwide but entries must be in English.
- Successful entrants must be willing and able to the city of Detroit as there will be expectations for on-the-ground presence during the next stage of the Challenge.
- Entrants must own or be licensed to use relevant intellectual property included in their entries. If your entry proposes a new idea, we expect that you will own all the resulting intellectual property, which may be registered on a local basis if you become a successful participant in the Challenge. The Challenge will not be able to give you specific legal advice on the protection or exploitation of intellectual property.

3.2 Judging Criteria - Overview

Below is an overview of the criteria that will be used to assess and select the semi-finalists, finalists, and eventually the winners. In the following page, we go into more detail on what we will be looking for when selecting the semi-finalists.

Reduction of Fossil-Fuel Use	Innovation in Eastern Market	Adoption Potential by Businesses	Technology Maturity	Potential to Scale	Capability to Deliver
Evaluates the potential impact of proposed solutions on decreasing fossil fuel use, thereby contributing to reducing emissions, air and noise pollution in Eastern Market.	Assesses the degree of improvement and novelty offered by proposed technologies compared to current practices in Eastern Market. It also considers how these solutions stand out in the broader landscape of emerging and sustainable freight innovations.	Focuses on the applicants' understanding of user circumstances, needs, and expectations and how these are addressed to improve the adoption potential of the solution by businesses in Eastern Market.	Evaluates the state of planning, development and testing at each stage of the technological roadmap, including co-design with users, off-site testing, and on-site demonstration in Eastern Market.	Assesses the solution's potential for achieving long-term market viability after the conclusion of the Challenge. It may include expanding to new customers (or use cases) within Eastern Market and beyond.	Evaluates the team's understanding of the skills and partnerships necessary to deliver the project and how well they fulfill these requirements.

3.2 Judging Criteria – Selection of Semi-Finalists

Below is more detail on what the judges and assessors will be looking for as they assess entries and select the semi-finalists.

Reduction of Fossil-Fuel Use	Innovation in Eastern Market Freight	Adoption Potential by Businesses	Technology Maturity	Potential to Scale	Capability to Deliver
Evaluates the potential impact of proposed solutions on decreasing fossil fuel use, thereby contributing to reducing emissions, air and noise pollution in Eastern Market.	Assesses the degree of improvement and novelty offered by proposed technologies compared to current practices in Eastern Market. It also considers how these solutions stand out in the broader landscape of emerging and sustainable freight innovations.	Focuses on the applicants' understanding of user circumstances, needs, and expectations and how these were addressed to improve the adoption potential of the solution by businesses in Eastern Market.	Evaluates the state of planning, development and testing at each stage of the technological roadmap, including co-design with users, off-site testing, and on-site demonstration in Eastern Market.	Assesses the solution's potential for achieving long-term market viability after the conclusion of the Challenge. It may include expanding to new customers (or use cases) within Eastern Market and beyond.	Evaluates the team's understanding of the skills and partnerships necessary to deliver the project and how well they fulfill these requirements.
<p>The entry demonstrates:</p> <ol style="list-style-type: none"> 1. The solution's approach has the potential to lead to a significant decrease in the use of fossil fuels. 	<p>The entry demonstrates:</p> <ol style="list-style-type: none"> 1. The solution's improved approach is expected to be novel (bringing unique value) compared to current practices in Eastern Market. 2. The solution's improved approach is regarded as innovative and bringing unique value, within the wider field of sustainable freight innovations. 	<p>The entry demonstrates:</p> <ol style="list-style-type: none"> 1. A proactive approach to engaging users in the proof-of-concept testing, beyond the engagement activities planned by the initiative. 2. Early assumptions and insights on the possible needs and expectations of users that will help with adoption. 	<p>The entry demonstrates:</p> <ol style="list-style-type: none"> 1. Well-evidenced description of the technology maturity and solution readiness for on-site demonstration within 6 month from submitting this entry. 2. Rigorous and feasible plans and budget for delivery of a proof-of-concept testing plan, including a risk assessment and proposed mitigations. 	<p>The entry demonstrates:</p> <ol style="list-style-type: none"> 1. A clear and realistic business or operational model that outlines a pathway to financial sustainability. 2. Early insights on the potential to be scaled or replicated in other contexts. 	<p>The entry demonstrates:</p> <ol style="list-style-type: none"> 1. Adequate availability, or a realistic plan to ensure adequate human resources, equipment, technology, or other resources required to develop, test, and demonstrate the solution. 2. The availability of, or a realistic plan to acquire, the relevant expertise and skills required to develop and demonstrate their solution. 3. A plan to leverage any required partnerships, networks, or collaborations, which may enhance the team's ability to develop and demonstrate their solution. 4. The team are either currently able to work in Detroit (meeting legal and regulatory requirements) or has a realistic plan to do so by the end of the semi-finalist period.

3.3 Entry Process

To enter the challenge, you must submit an entry via the online form. **The deadline for submitting your entry is 12:00 EDT (16:00 UTC) on Thursday 12th September 2024.** We will not be able to accept any entries after this time. If you are entering as a consortium, the lead organization or individual will need to submit the form.

Before submitting your entry, please ensure that:

- You have read and understood the [Challenge Terms and Conditions](#) and [Privacy Policy](#)
- You meet the eligibility criteria (see page 16 of this handbook)
- Your entry is aligned with the Challenge Statement (page 11 of this handbook) and judging criteria (pages 17 and 18 of this handbook).

You can download a PDF of the entry form using the link provided in this handbook. However, please note that only entries submitted through the online form will be accepted.

If you have any questions about the Challenge or the entry process, please send them to us at info@sustainablecitieschallenge.org by **4th September 2024**. After this date, we may not be able to respond to you in time.

Need support with your entry?

We offer a range of support to help you as you prepare your entry to the Challenge; visit [our website](#) to sign up for a webinar or book a one-to-one session with the team.

ENTRY DEADLINE:

**12:00 pm EDT,
Thursday 12th September 2024**

[Link to the online entry form](#)

[Link to downloadable PDF entry form](#)

Remember that only entries submitted online will be accepted.

3.4 The Entry Form

ENTRY DEADLINE:
 12:00 pm EDT,
 Thursday 12th September 2024

[Link to the online entry form](#)

[Link to downloadable PDF of entry form](#)

Remember that only entries submitted online will be accepted.

The Eligibility Form:

When you click on the **online entry form** you will first be directed to an **eligibility form**:

- The eligibility form will help you understand if you are eligible to enter the Challenge. You must read and understand the eligibility criteria in full.
- Entries that do not meet the eligibility criteria will not proceed further, and entrants will be informed accordingly.

The Entry Form

There are four sections in the entry form, and only one of these sections will be assessed against the judging criteria:

Entry Form Section	Details	How will this be assessed?
Part 1: Your Details	You will be asked for: <ul style="list-style-type: none"> - Basic details about the organizations entering. - The main point of contact and an alternate. 	This section will <u>not</u> be assessed against the judging criteria. Information here may be used for due diligence processes and additional eligibility checks.
Part 2: Your Solution	You will be asked to explain your proposed solution, how it fits the challenge statement and the challenge judging criteria.	This is the section that will be reviewed and scored against the judging criteria by assessors and judges.
Part 3: Additional Information	You will be asked to provide information that will help us with our impact reporting and due diligence checks.	This section will <u>not</u> be assessed against the judging criteria. It will help us to understand the Challenge's impact and to conduct due diligence.
Part 4: Declaration	You will be asked to confirm that the information you have provided is true and correct to the best of your knowledge.	This section will <u>not</u> be assessed against the judging criteria.

4. Get in Touch

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Contact information & Entrant Support



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Thank You

