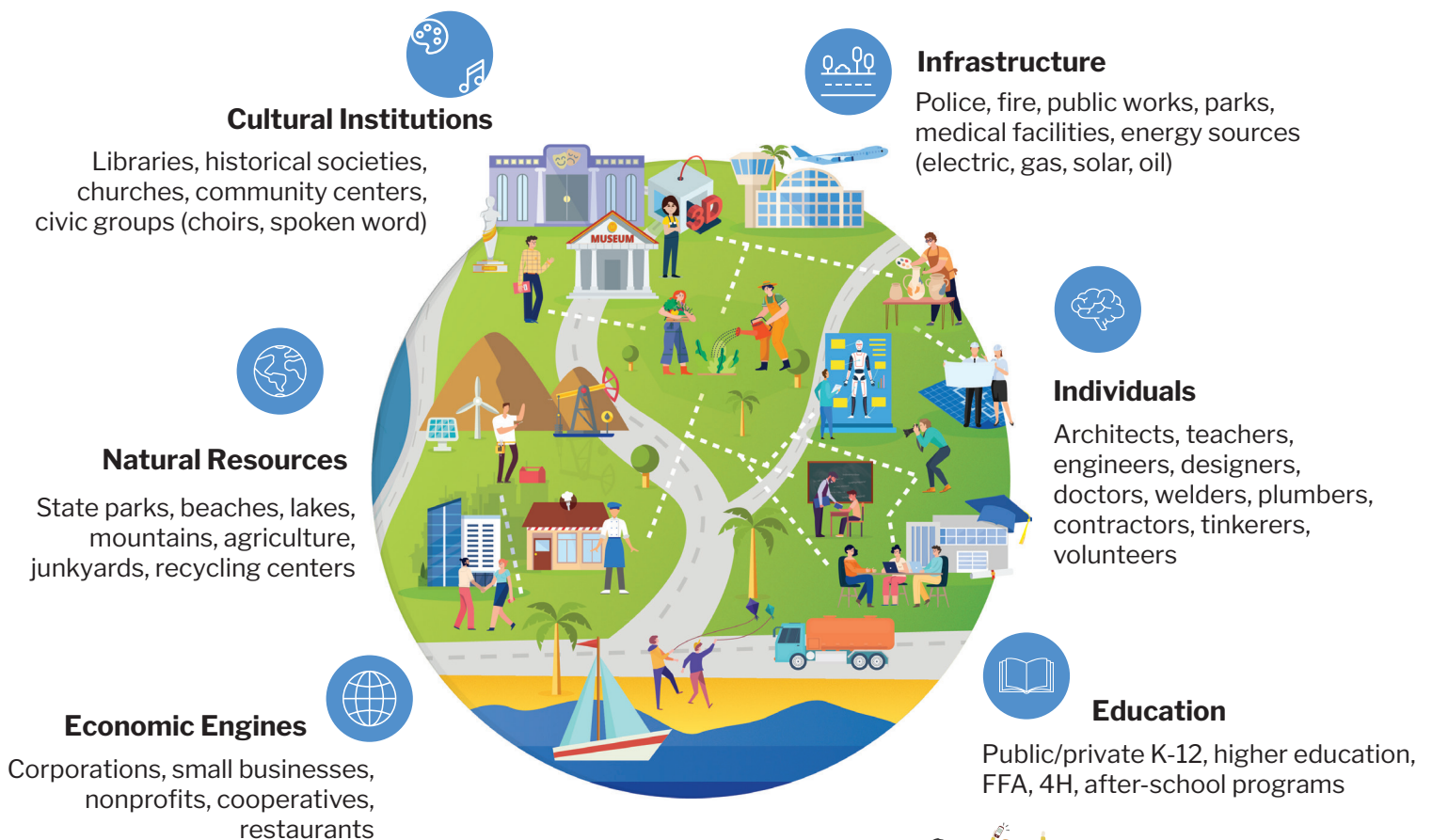# STEAM Ecosystem Mapping Tool

by Dramatic Results

A STEAM ecosystem is a cross-sector network focused on providing access to high quality learning experiences for young people so they can develop important skills and engagement in science, technology, engineering, art and math (STEAM). It connects students with the world outside of school, showcases careers and mentors, and supports equity and inclusion in a strong workforce.

The Art of Building a City (ABC) STEAM Ecosystem is a collaboration among professionals in education, research, and STEAM to provide opportunities for underserved gifted middle school students in Long Beach, CA.

Use this guide to build a STEAM ecosystem to support the youth in your own community.

① IDENTIFY ECOSYSTEM PLAYERS, STRENGTHS AND CHALLENGES

Every community has an abundance of resources. Here are some examples to get you started.

Cultural Institutions

Libraries, historical societies, churches, community centers, civic groups (choirs, spoken word)

Infrastructure

Police, fire, public works, parks, medical facilities, energy sources (electric, gas, solar, oil)

Natural Resources

State parks, beaches, lakes, mountains, agriculture, junkyards, recycling centers

Individuals

Architects, teachers, engineers, designers, doctors, welders, plumbers, contractors, tinkerers, volunteers

Economic Engines

Corporations, small businesses, nonprofits, cooperatives, restaurants

Education

Public/private K-12, higher education, FFA, 4H, after-school programs

TIP
Start a conversation in your community and discover ideas for real world applications of learning.

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② ESTABLISH SHARED GOALS

Ask each potential collaborator:

1. What is/are your areas of STEAM experience and/or expertise?

2. What is your "WHY" for wanting to be a part of this STEAM collaborative?

3. What are your concerns/challenges when considering joining our collaborative?

4. What would you need from this collaborative to feel successful?

5. How do you see this STEAM collaborative furthering your individual/group's goals?

Focus on the *Why*

Identifying a collaborator's *why* will allow both parties to continually find value in the collaborative.

For example, many smaller agencies don't have education departments but they do have education in their mission. Often, these agencies need training and increased access to students. In turn, they can provide valuable access to real-world design opportunities and professional pathways.

> **TIP**
> Not all collaborators need to be educators. Take into account the organizational cultures and personal strengths of collaborators to find unique ways for them to contribute.

③ SELECT A HUB ORGANIZATION

The Hub

We recommend there be **ONE** organizer for this STEAM ecosystem to act as the "hub". They will provide agreed-upon structural services to the group to ensure each individual STEAM collaborator can focus on their individual area of strength and, together, have the greatest impact for the greatest good.

> **TIP**
> Develop multiple points of contact between the hub organization and the collaborators, maintain "high touch" relationships, and follow and engage collaborators in continuous quality improvement.
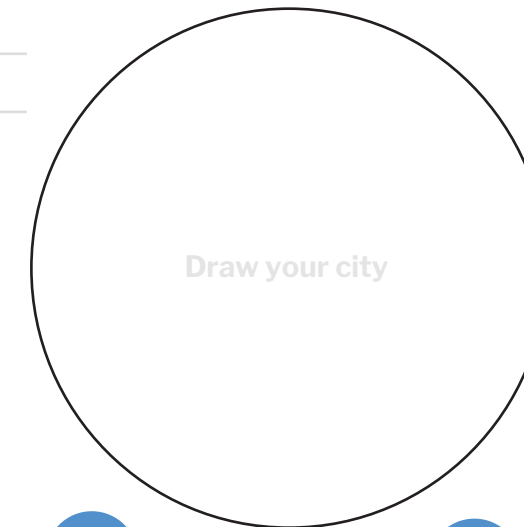
Hub Check List ✓

- ☐ Access to students
- ☐ Oversight of aligning program content with standards
- ☐ Capacity for administration, logistics, and scheduling
- ☐ Evaluation
- ☐ Funding
- ☐ Publicity and reports to funders

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④ MAKE A PLAN

Key Questions

WHO is the target youth population? What specific needs do they have? What are their characteristics as learners?

WHAT experiences can the collaborators provide to support the needs of the target population while also fulfilling their own organizational missions?

WHEN and **WHERE** can collaborators meet with youth and with each other?

HOW will the ecosystem know it is successfully meeting everyone's needs?

Why? _____

_____

_____

Cultural Institutions

Strengths
List all the strengths in your community. Who are your players?

Infrastructure

Natural Resources

Draw your city

Individuals

Economic Engines

Economic Engines

Challenges   What are some of the challenges your community may face and how might you work through them?

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abc collaborative

ART OF BUILDING A CITY

E C O S Y S T E M

Long Beach, CA

Growing Experience
Urban Farm

Long Beach Historical Society
Local History

Long Beach Unified
School District

Dramatic Results
*ABC Project Lead &
Arts Education Agency*

Iron Chef Catering
Cooking with STEAM

Cal State Long Beach
Pre-service Educators

Long Beach Library
Maker Studio

Architects
Design Proccess

U.S. Sailing Center
Science of Sailing

Here are the ABC Project's answers to key questions:

WHO: Underserved gifted middle school students

WHAT: Summer STEAM Institutes, Saturday STEAM School, and Extension Opportunities

WHERE: Six Title I middle schools and community organizations' spaces in Long Beach, CA

WHEN: During the summer, Saturday mornings and out of school throughout the school year.

WHY: *1)* Gifted students need STEAM learning challenges to stay engaged and high achieving, and *2)* STEAM organizations and professionals want to have greater impact.

To download this tool, visit dramaticresults.org/abceco

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