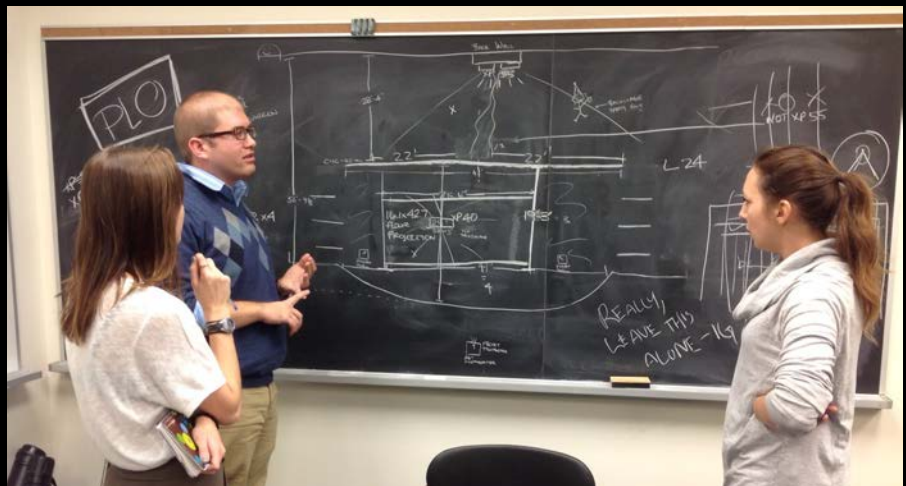


**Hello**













## Readings in Performance and Ecology

WHA  
TUCR



Edited by  
Wendy Arons and Theresa J. May



## Arts, the Environment, & Sustainability

Excerpted from Arts & America: Arts, Culture, and the Future  
of America's Communities







# Key Concepts





# **An Evening with William Shatner\***

There is a special kind of art  
and a special kind of science  
that point to each other. In  
this special kind of art and  
science this is what happens:

**Science makes data out of  
experience, and then art  
makes experience out of  
that data.**

**...a transition from not listening to me to...**



# Sustainability

"...About the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development."

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

- Brundtland Commission (1983)

The field of sustainable development has been broken down into three conceptual parts in support of this definition:

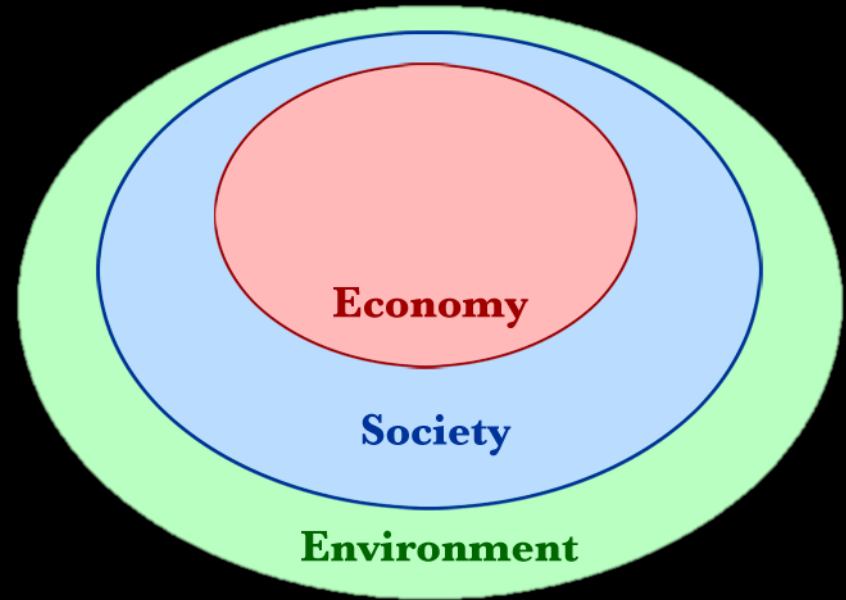
Environmental

Economic

Sociopolitical

# True Assumptions about the Arts

- 1** The Arts serve as a demonstrable community and social value building tool and a key driver of the reification of individual and community identity
- 2** The arts are drivers of local economies with financial impacts as high as 4x on the dollar for public investment.
- 3** When examined in the greater context of the environmental impacts of human activities where there is a choice between an arts/cultural experience versus other activity, the congregating effects of collective experiences trends towards improved impact metrics.





# UN Sustainable Development Goals



# Systems Thinking

Understanding how things influence one another within a whole.

For example: ecosystems in which various elements such as air, water, movement, plants, and animals work together to survive or perish.

# Wicked Problems

Problems that are difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize.

Not evil, but resistant to resolution.



EXTERNAL ENVIRONMENT

PURPOSE, MISSION, VISION

GOVERNANCE

RISKS AND  
OPPORTUNITIES

STRATEGY AND  
RESOURCE ALLOCATION

BUSINESS MODEL

BUSINESS  
ACTIVITIES

OUTPUTS

OUTCOMES  
(POSITIVE AND  
NEGATIVE OVER THE  
SHORT, MEDIUM  
AND LONG TERM)

PERFORMANCE

OUTLOOK

INPUTS

FINANCIAL

MANUFACTURED

INTELLECTUAL

HUMAN

SOCIAL AND  
RELATIONSHIP

NATURAL

FINANCIAL

MANUFACTURED

INTELLECTUAL

HUMAN

SOCIAL AND  
RELATIONSHIP

NATURAL

VALUE CREATION, PRESERVATION OR EROSION OVER TIME

Environment

Society

Economy

BIOPHYSICAL  
STOCKS



ECOSYSTEM  
SERVICES



PROCESS

RESOURCES



PARTNERSHIPS



ACTIVITIES



GOVERNANCE



VALUE

VALUE  
CO-CREATIONS



VALUE  
CO-DESTRUCTIONS



PEOPLE

RELATIONSHIPS



STAKEHOLDERS



CHANNELS



ECOSYSTEM  
ACTORS



NEEDS



COSTS



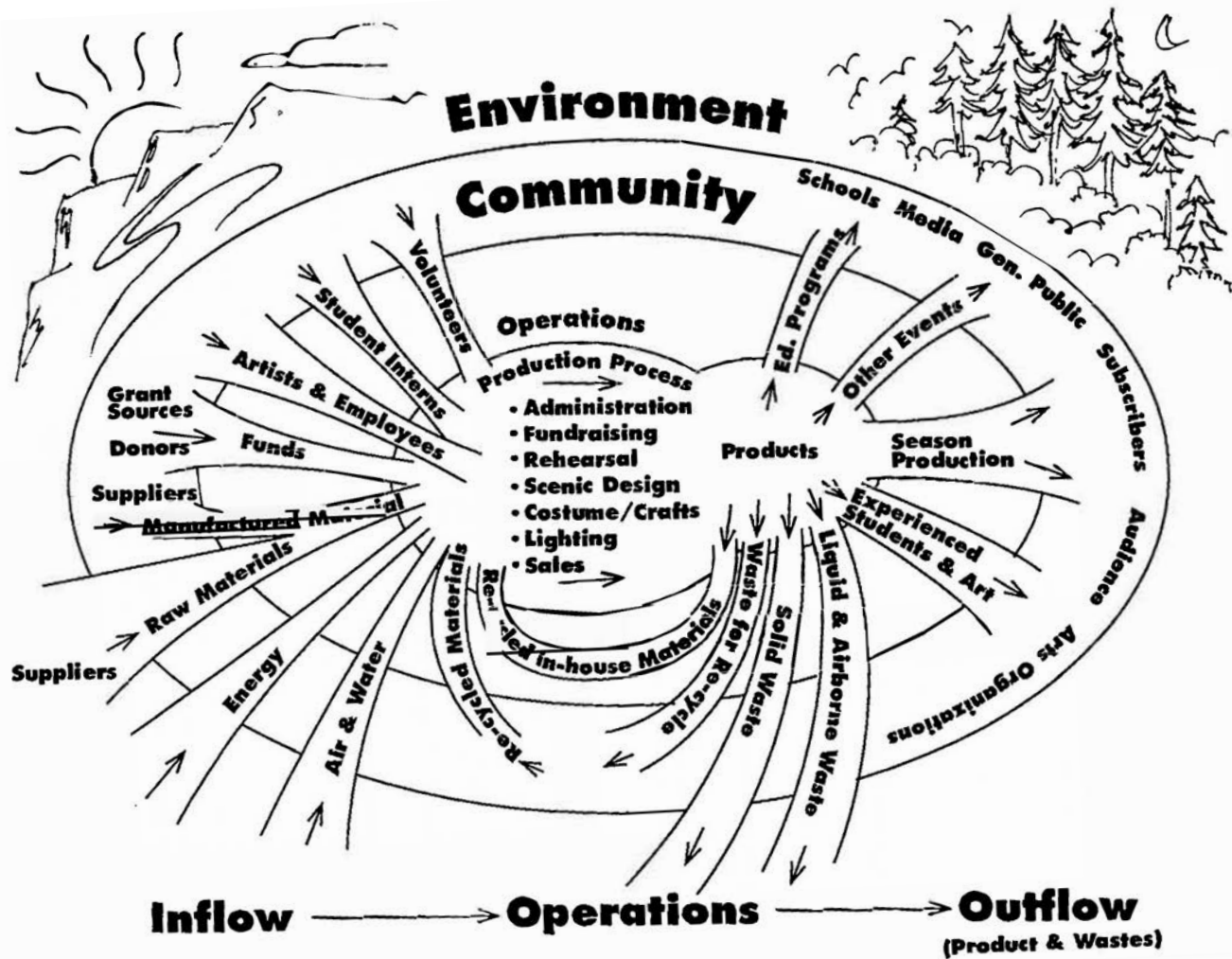
GOALS



BENEFITS

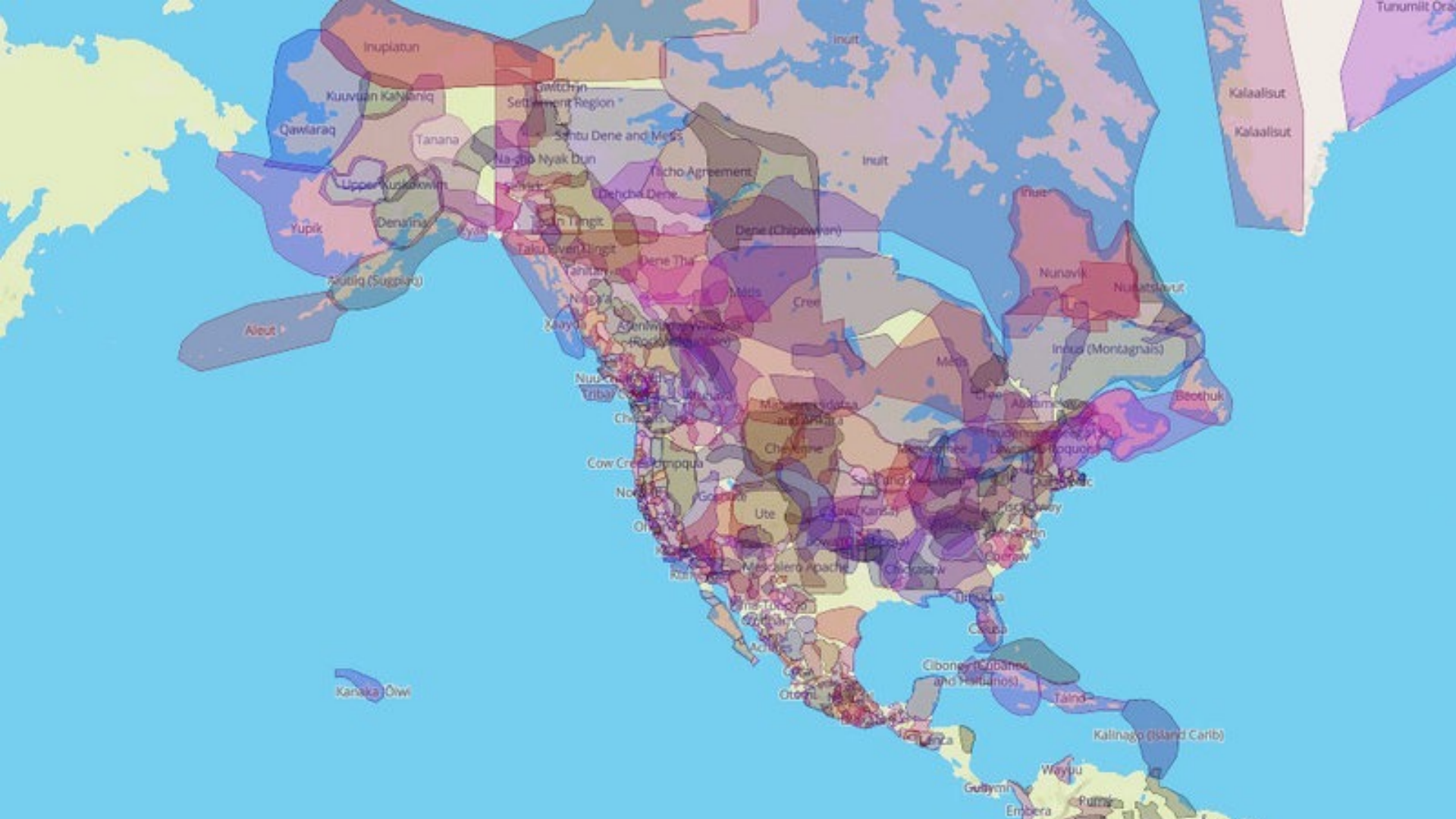


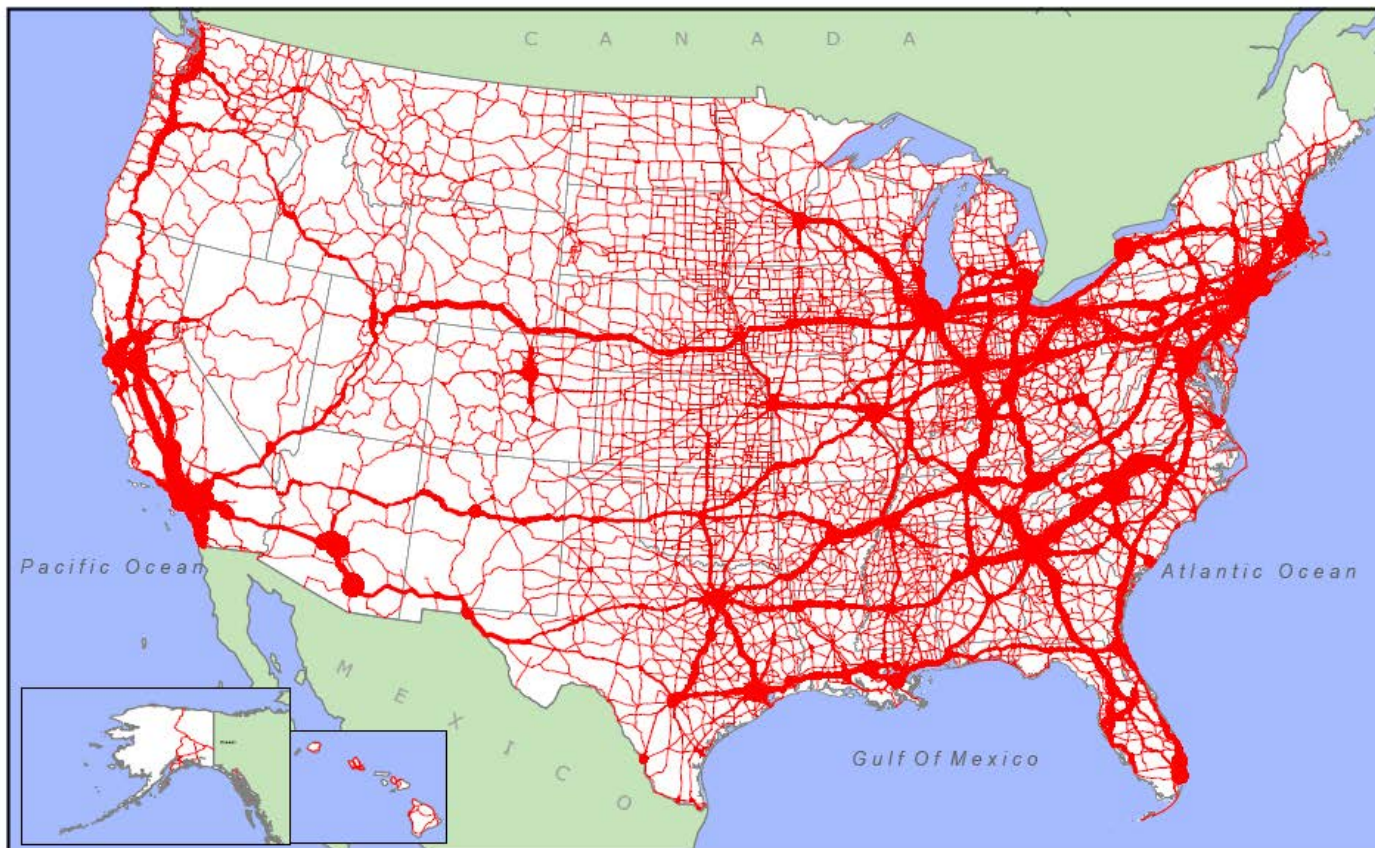
OUTCOMES





**Systems Tell Stories About Values**





US Department of Transportation  
Federal Highway Administration  
Office of Freight Management and Operations  
Freight Analysis Framework

### Estimated Average Annual Daily Truck Traffic

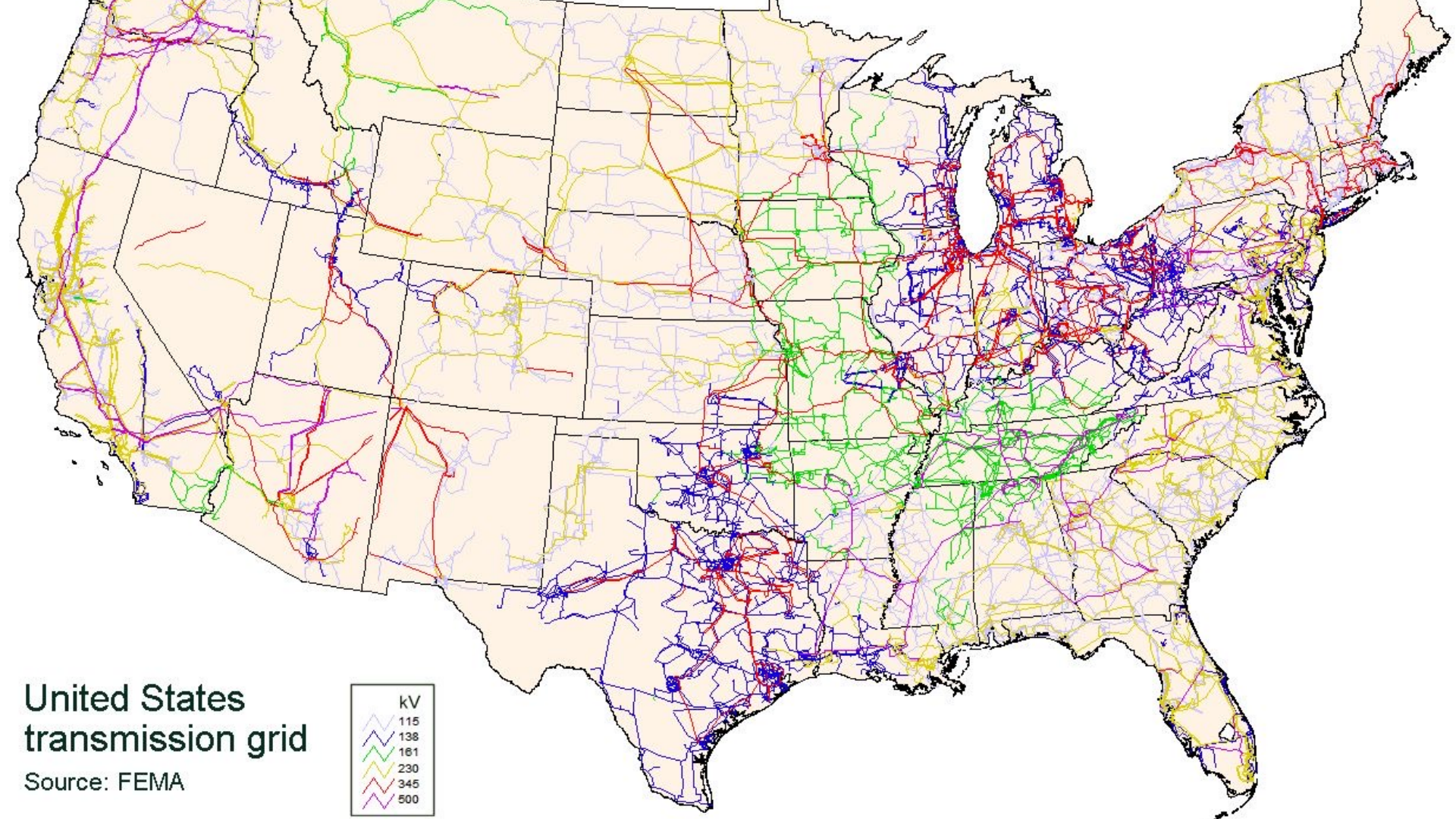
(1998)

Truck Volume Scale



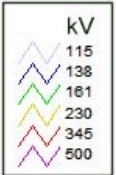
50,000 25,000 12,500



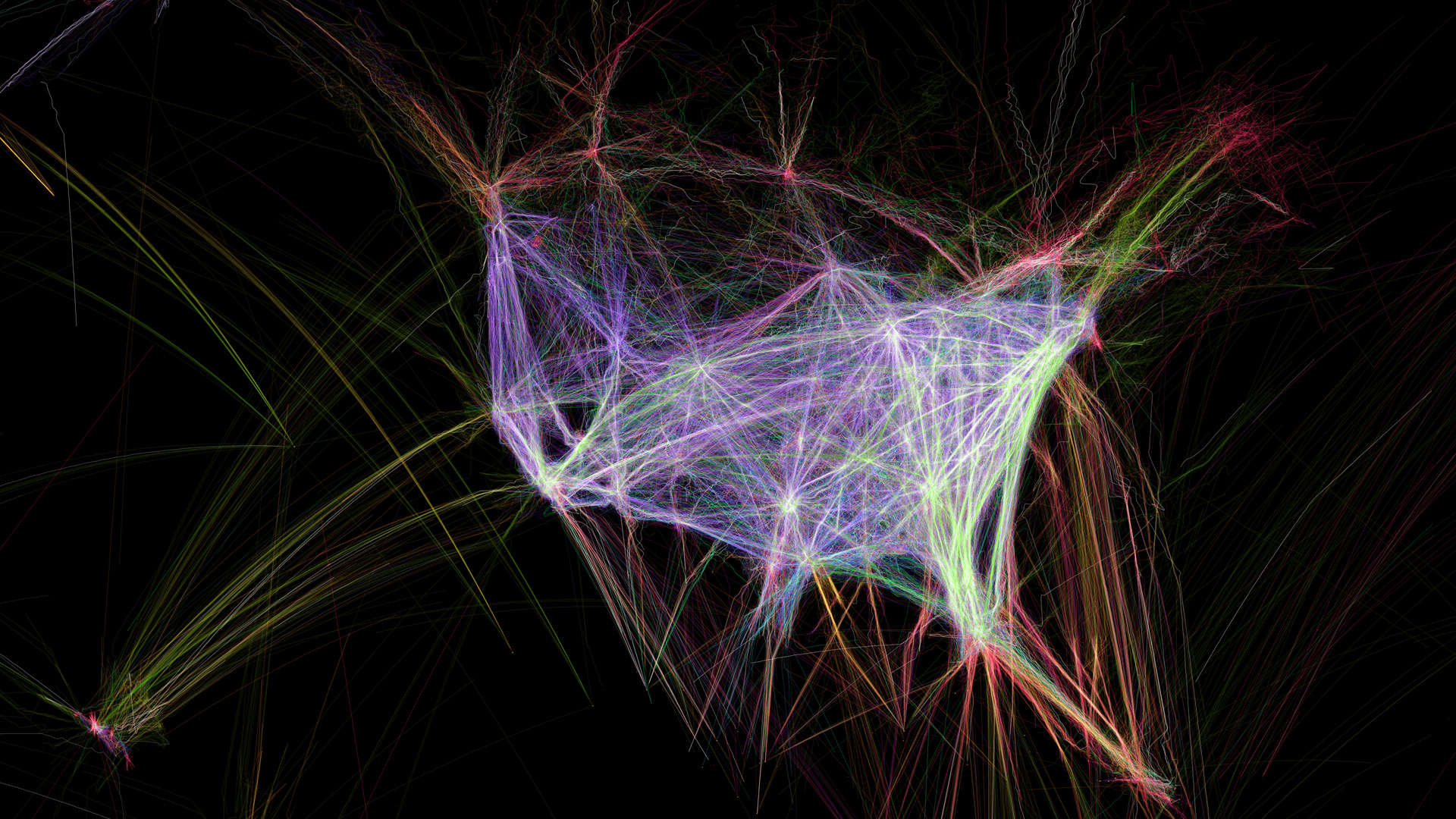


# United States transmission grid

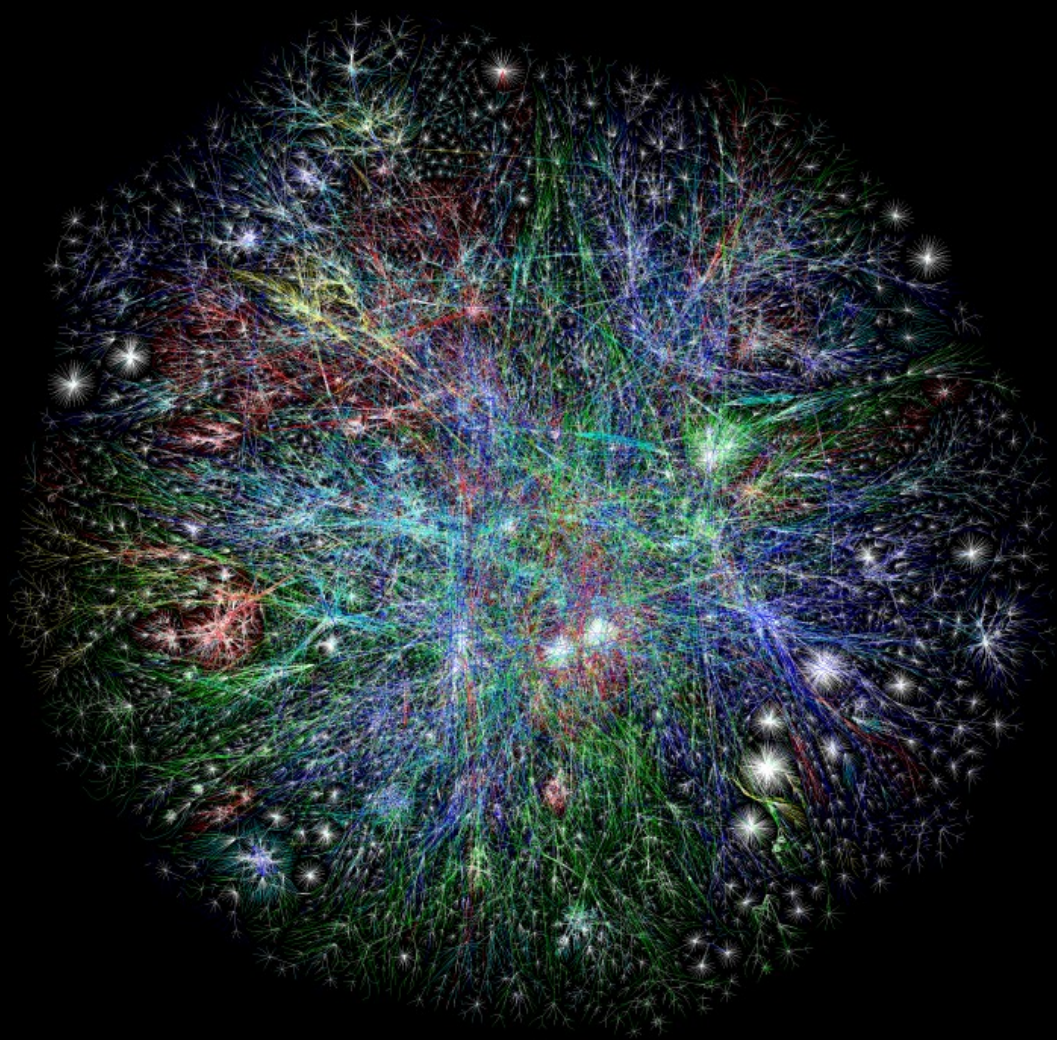
Source: FEMA







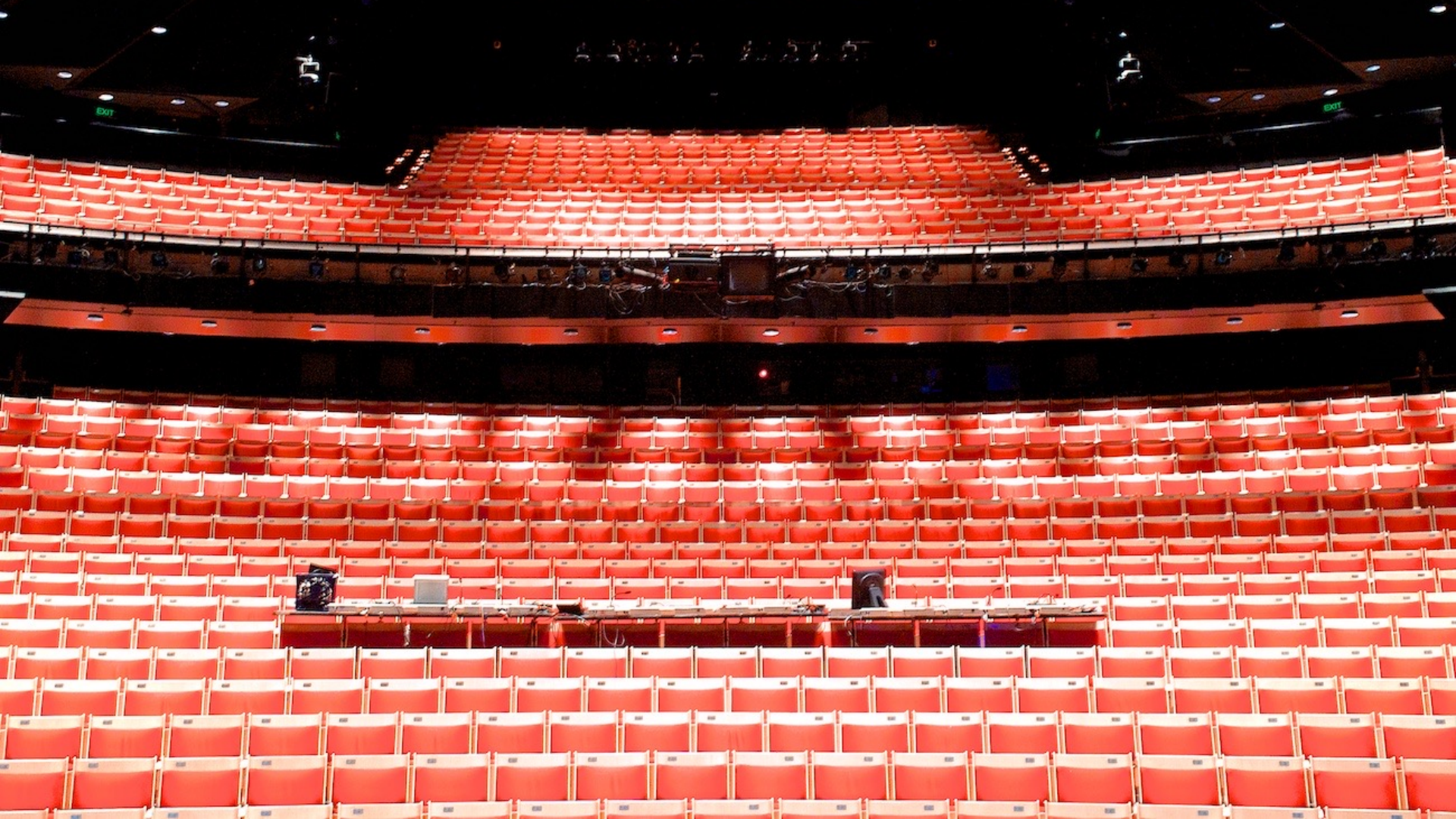














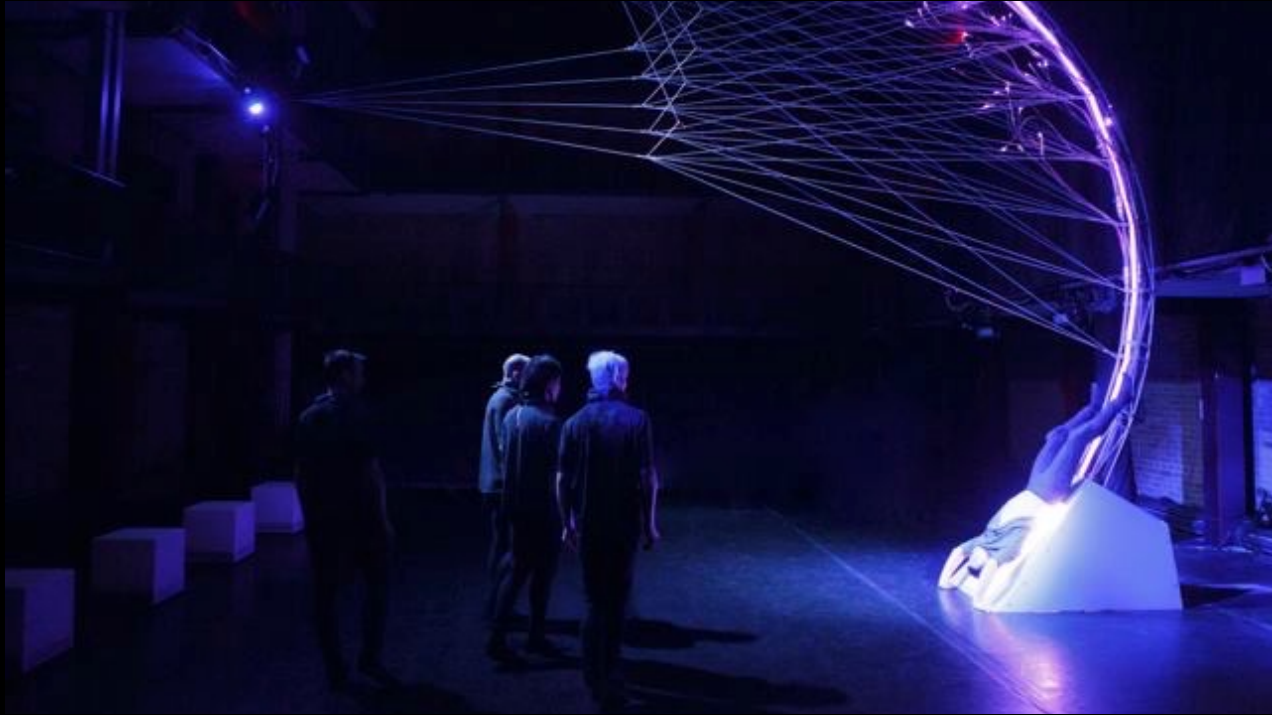








# Vox Lumen









# Embodied Carbon

Material extraction

Transport

Manufacturing

Transport Again

Use

Disposal

Cradle to Gate



Life Cycle



# Embodied Carbon



# Embodied Carbon

## Laptop

2000 kWh Embodied Energy = 2300kg CO<sub>2</sub>e

## Email

4g CO<sub>2</sub>e

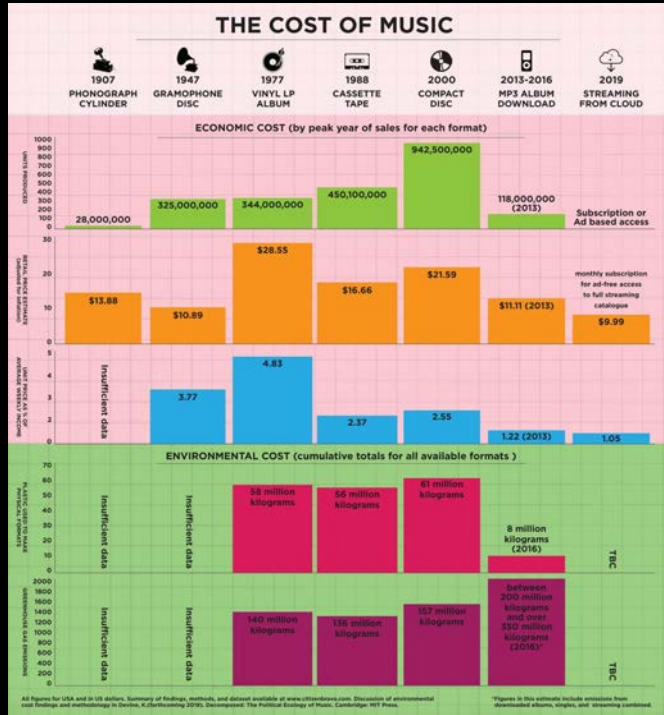
## Email with big attachments

50g CO<sub>2</sub>e





# What is the cost of music in the so-called Anthropocene?



Music streaming has a far worse carbon footprint than the heyday of records and CDs

- Matt Brennan & Kyle Devine  
The Conversation, April 9, 2019



# NAC Green Rooms Traditional Vs

NAC ENGLISH THEATRE | THE CYCLE

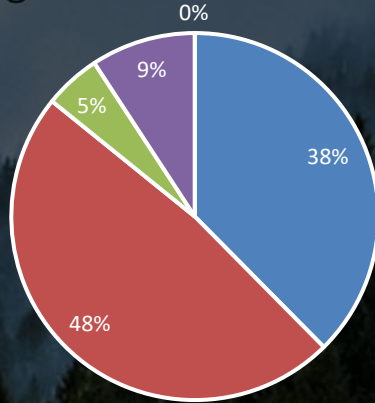
## Hub

### Climate change

The Earth is Watching...Let's Act.

Traditional Modal Split

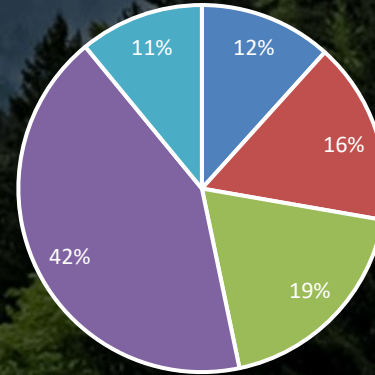
Flight Train Car Walk/Transit Walk



31,902 kg of CO<sub>2</sub>e

Hub Modal Split

Flight Train Car Walk/Transit Walk



6,968 kg of CO<sub>2</sub>e

78% Reduction

# NAC Green Rooms Streaming

NAC ENGLISH THEATRE | THE CYCLE

## Climate change

The Earth is Watching. Let's Act.

### **Traditional**

**31,902 kg of CO<sub>2</sub>e**

### **Hub Model**

**6,968 kg of CO<sub>2</sub>e**

### **Stream**

**7.64 Kg CO<sub>2</sub>e**

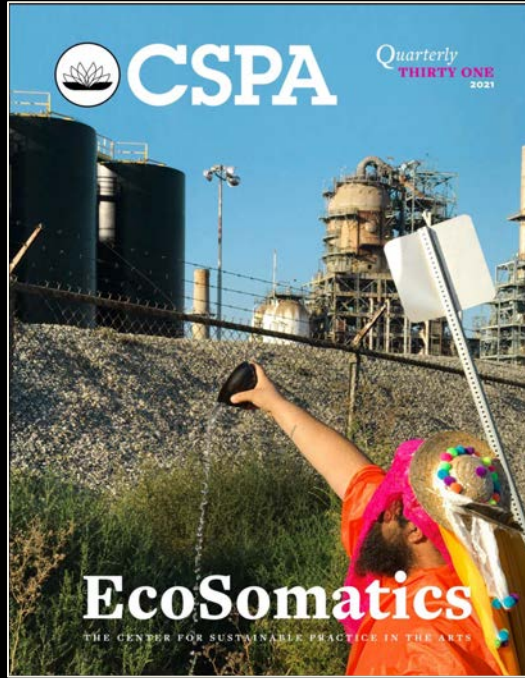
With an estimated 78% reduction in emissions as a result of eliminating the majority of long-haul air travel through a distributed number of connected gathering hubs, moving to an online-only streaming format is estimated to reduce emissions by over 99% of either a traditional or a hub-based in-person format.



# What is the CSPA?



# CSPA Quarterly



## Q38: Heal the Man, Heal the Land

Patricia Watts, founder and curator of ecoartspace, is editor of this issue, which includes essays on the mining of cobalt by Mary Mattingly and...



## Q36: both/and

We live in times that are impure — confusing and compromised — and this requires contingent thinking and acting. What happens when artists get...



## Q34: Bodies in Community

Bodies in Community explores how people move together: as an actual single body with its various markers in regards to a certain community or...



## Q37: Interspecies Thresholds

How can we approach the non-human with authenticity? Resisting stereotype and symbolic simplification, can we instead move between the imperfect...



## Q35: Decolonizing Ecologies

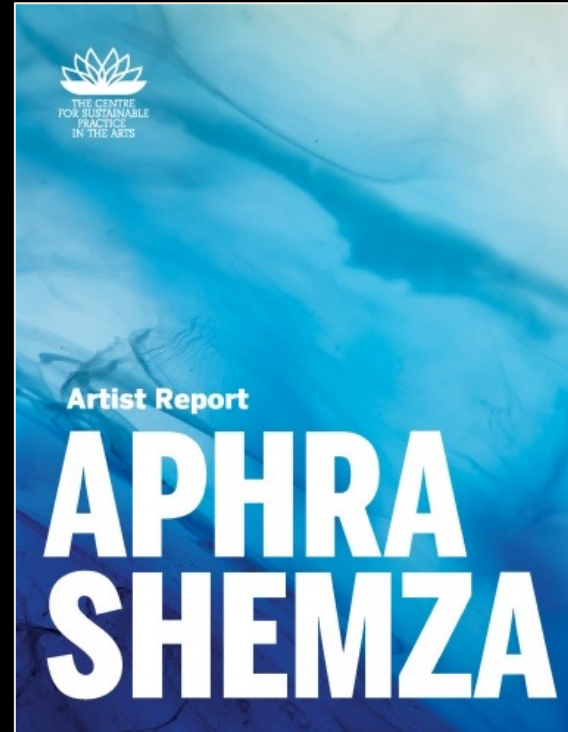
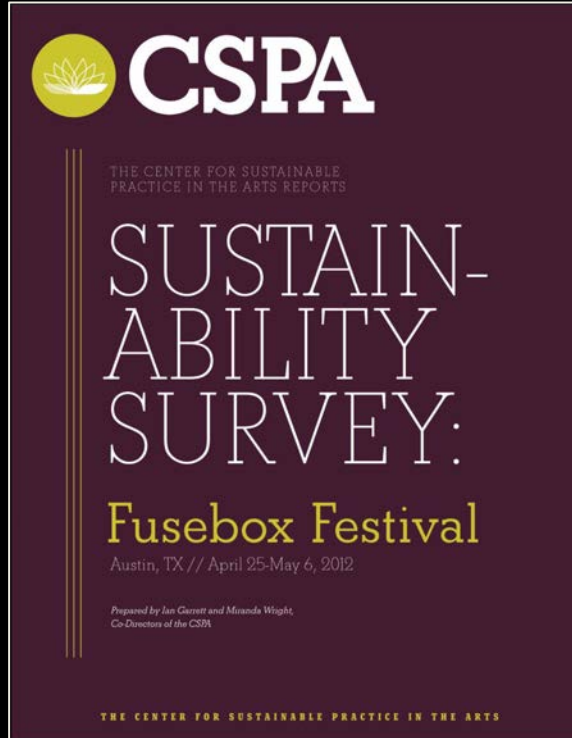
This issue of CSPA Quarterly destabilizes Colonial Settler perspectives in ecological art practices. By bringing together artists and writers who...



## Q33: For a New Gentleness

In "The Three Ecologies," Félix Guattari asked to "organize new micropolitical and microsocial practices, new solidarities, a new gentleness,..."

# CSPA Reports



# Creative Climate Leadership







# Department of Utopian Arts and Letters

a project of public dreaming born out of desires for decolonization, climate justice, and collective liberation.

It envisions Plural Utopias Of the Future (PUOF), each imagined through the radical thinking of diverse artists. DUAL operates within, across, and beyond official governmental and academic departments to empower us with visions of the future to work towards and the necessary "curricula" to dismantle the systems that stand in our way. It offers a free, public education for thriving futures designed by community expert artist "faculty" and organized by counterpart "librarians."



# Creative Green Tools



THE CENTRE  
FOR SUSTAINABLE  
PRACTICE  
IN THE ARTS



Conseil québécois  
des événements  
écoresponsables

Canada 



Canada Council  
for the Arts

Conseil des arts  
du Canada

## What is Creative Green?

The Creative Green Tools are a set of **carbon calculation** and **reporting tools** developed specifically for arts and culture.

This includes theatre, museums, music, visual arts, literary arts, and everything in between!



Creative Green

## THE CREATIVE GREEN TOOLS CAN BE USED TO CALCULATE THE CARBON FOOTPRINT OF:

FESTIVALS

TOURS

VENUES

CULTURAL  
BUILDINGS

OFFICES

PRODUCTIONS

INDOOR AND  
OUTDOOR EVENTS

THEY WILL MEASURE THE IMPACT OF YOUR ORGANIZATION'S ENERGY USE, WATER USE, WASTE, TRANSPORTATION AND MORE!

THEY WERE DEVELOPED BY JULIE'S BICYCLE FOR THE UK ARTS AND CULTURE SECTOR, AND WE WANT TO BRING THEM TO CANADA!



Creative Green

# About the Tools

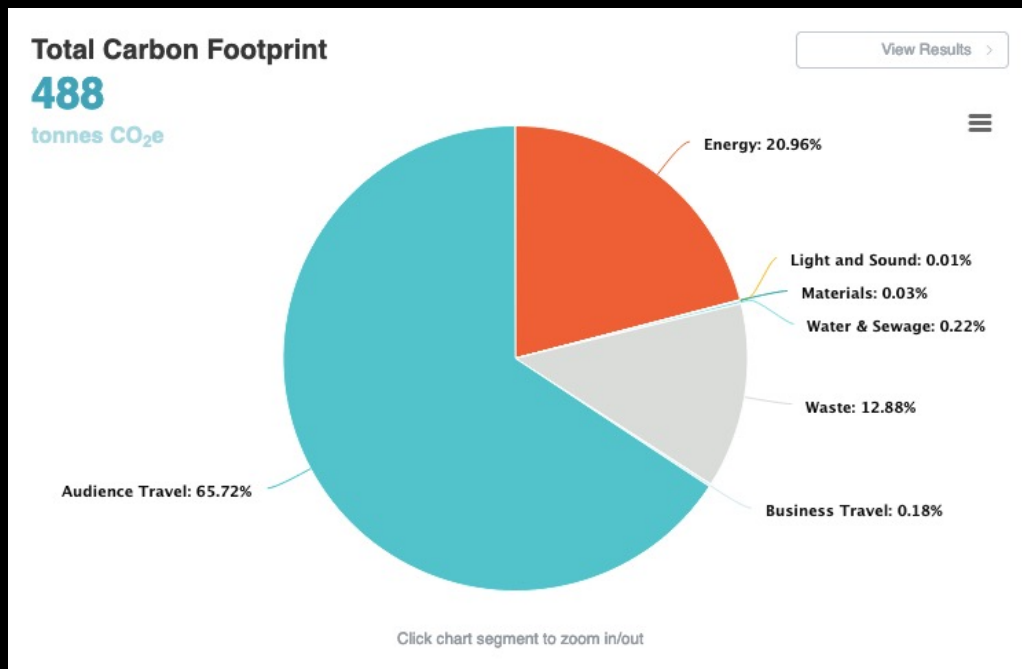


Creative Green

- Created in 2009 by Julie's Bicycle – a UK-based charity that supports the creative community to act on climate change and environmental sustainability
- Built with the philosophy that creative industries have a unique ability to drive change
- Designed to be simple and accessible
- Have helped the arts and culture sector in England increase its awareness of environmental issues and reduce its carbon footprint by 41% over 6 years
- Continuously updated and co-created by the sector



# Key Features



- Built according to the demonstrated needs of the sector
- Bilingual (EN/FR)
- Welcoming to Indigenous users & enriched by traditional knowledge
- Accessible
- Inclusive
- Free

# Partners



Creative Green

- Julie's Bicycle
- Professional Association of Canadian Theatres (PACT)
- Écoscéno
- The Arctic Cycle
- Associated Designers of Canada (ADC)
- Association Des Professionnels Des Arts De La Scène Du Québec (APASQ)
- Association des théâtres francophones du Canada (ATFC)
- Canadian Institute for Theatre Technology (CITT/ICTS)
- Canadian Museums Association (CMA)
- Canadian Network for Arts and Learning (CNAL)
- CAPACOA
- Climate Emergency Unit
- Coalition of Museums for Climate Justice
- English Language Arts Network (ELAN)
- Indigenous Performing Arts Alliance
- le Conseil québécois du théâtre (CQT)
- Music Declares Emergency Canada
- Orchestras Canada
- Canadian Arts Coalition
- Supporting Performing Arts in Rural & Remote Communities (SPARC)

# Benefits of the CG Tools

A solid foundation on which to build a wider environmental framework

A common platform facilitates collaboration and knowledge sharing

For some organizations, a concrete first step towards environmental engagement

Increased carbon literacy and awareness in the sector

Ability to set and collaborate on science-based targets

Community of practice and networks of engaged cultural professionals

Contributes to national and international benchmarking and data sets

Sets an example for other sectors, creating a positive ripple effect



## ABOUT US PROGRAMS

Quarterly  
Reports

Climate Change  
Theatre Action  
Resource & Tools  
Convergence

Fringe

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PARTNERS

LIBRARY

ARCHIVES

Recent Open Calls

Submit

A Think Tank for  
Sustainability in  
the Arts and

# RESOURCE & TOOLS

## 1. Arts Certification, Guidance and Assessment

- 1.1. Arts:Earth Partnership
- 1.2. Centre for Sustainable Practice in the Arts
- 1.3. Creative Carbon Scotland
  - 1.3.1. Green Arts Initiative
  - 1.3.2. Carbon Management Tools
- 1.4. Creative Green Tools – Canada
- 1.5. Julie's Bicycle
- 1.6. REFOCUS – Harbourfront Centre

## 2. Exhibition

- 2.1. Chrysalis Arts (Public Art Sustainability Assessment)
- 2.2. Coalition of Museums for Climate Action
- 2.3. Gallery Climate Coalition Carbon Calculator
- 2.4. Ki Culture
- 2.5. OMSI (Oregon Museum of Science and Industry) Exhibition Design
- 2.6. STITCH – Sustainability Tools in Cultural Heritage

## 3. Film Production

- 3.1. albert
- 3.2. Environmental Media Association
- 3.3. Green Production Guide
- 3.4. Ontario Green Screen
- 3.5. ReelGreen – Creative BC

## 4. Graphic Design, Printing, Publication

- 4.1. Re-nourish

## 5. Performance

- 5.1. ReelGreen – Creative BC

[sustainablepractice.org/tools](https://sustainablepractice.org/tools)

Search

**CG TOOLS  
CANADA**

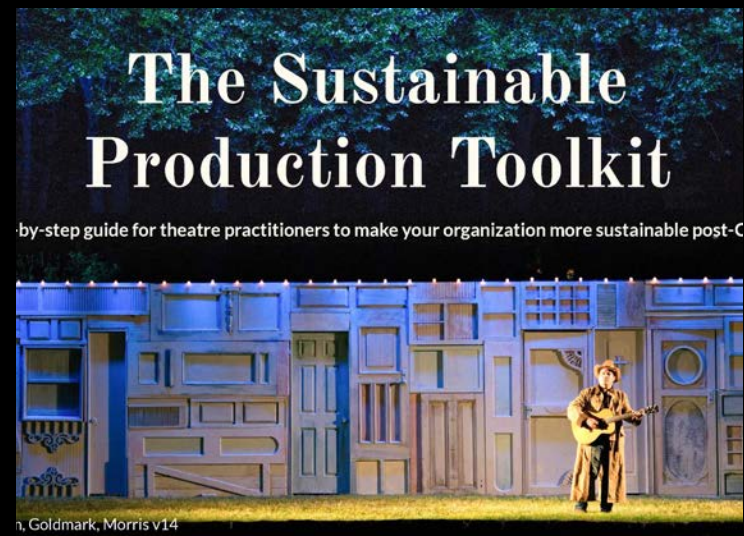
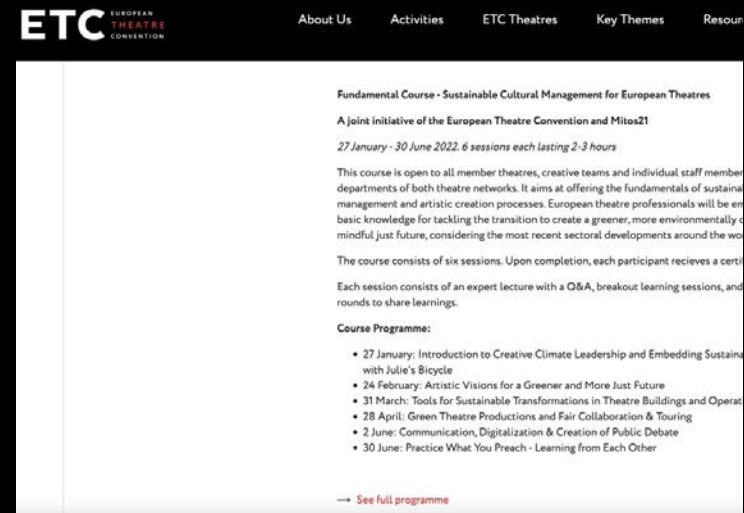
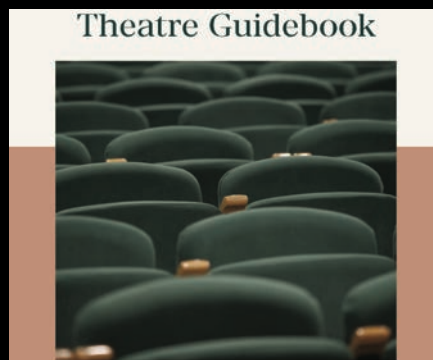


Creative Green

**QUARTERLY 38  
FOR 2023!**



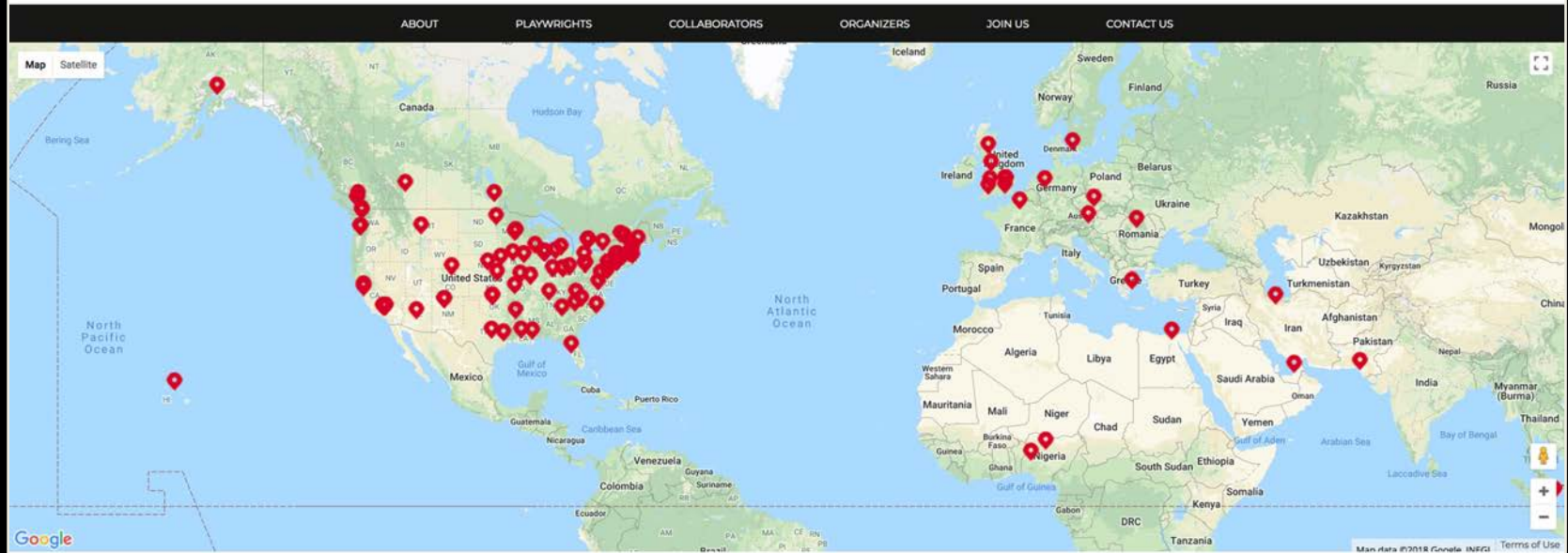
# International Tools/Guides Meet-Ups



# Climate Change Theatre Action



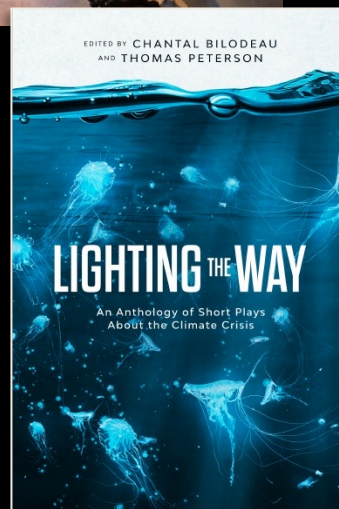
Our Planet. Our Future. Our Responsibility.



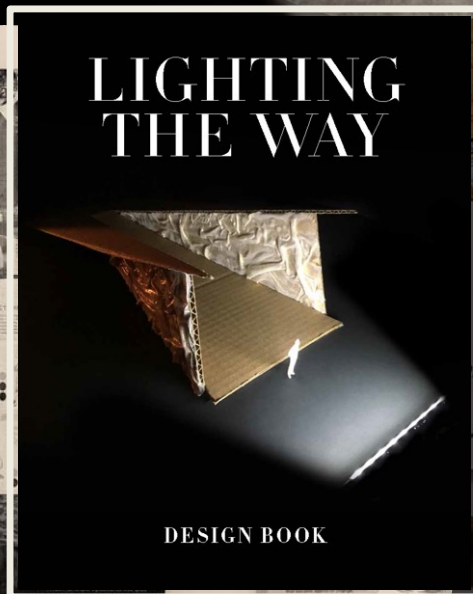
Climate Change Theatre Action







# CCTA EcoDesign Charrette



NEEDED - ...  
ATED OR NO ACCO-  
LES AND STANDING THE WAY CAN BE  
BE USED TO ELIMINATE THE  
DO ONE-TOUR COMPANIES  
HAVE THE

PLAY BY: NIKHIL B...  
"WHAT ARE YOU LOOKING AT.  
THAT.  
THE WINDMILL? OR THE SOLAR PANELS?  
WHAT ARE THOSE?  
ENERGY?"



//

## **Ecoscenographic Framework (Beer 2021)**

### **Co-creation**

...a form of engagement where theatre makers align themselves with place—to open up to the 'worlding' of collaboration that takes into account co-extensive histories and futures across venues, communities and materials...

### **Celebration**

Ecoscenography nurtures the performance season not as an endpoint, but as a vibrant and highly visible celebratory mid-point in the creative process.

We celebrate the emergence of the show, and we celebrate the stage as a platform for the meaningful communion, connection and crosspollination of culture and ideas...

### **Circulation**

In Ecoscenography theatre materials and ideas are not mindlessly discarded, but considered as potential resources for sharing and co-creation beyond the production...Designing with circulation in mind allows theatre makers to consider how set and costumes may be dismantled and shared for reuse. Circulation becomes a form of contribution.. (Beer 2021, p. 115, 116, 122-3)

//

