# **ICC National Convening Meeting Overview and Participant Contributions**

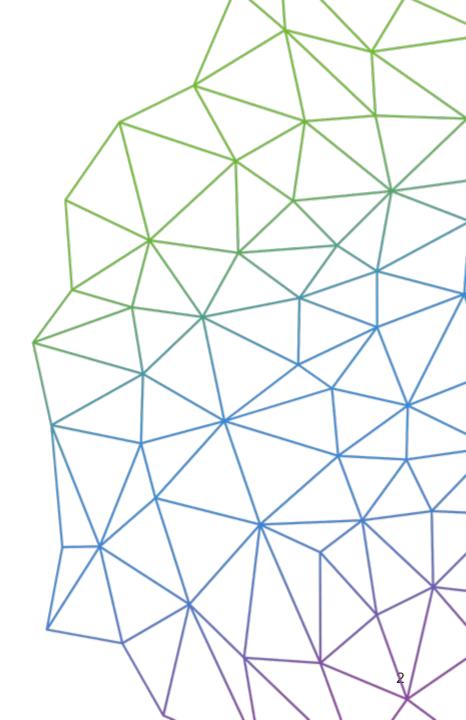
December 5<sup>th</sup> and 6<sup>th</sup>, 2024 **UCLA Luskin Conference Center** Los Angeles, California



This project is supported by the **National Science Foundation** (Award TF-2345797) and **UCLA DataX**. Opinions expressed within do not necessarily reflect those of the NSF, UCLA, or Phillips&Co.

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# ICC National Convening Overview

# **Report Background**

Through a grant from the National Science Foundation (NSF), the Innovation, Culture, and Creativity (ICC) project brought together experts and stakeholders from creative and technology fields to develop new opportunities at their intersection.

During the recent ICC National Convening, the joint Principal Investigator team from UCLA and UCSB asked Phillips & Co., an innovation strategy firm, to assist with design and facilitation of a conference that would explore how to support research and innovation at the intersection of culture, creativity and technology.

This report details those insights.



# **About the ICC National Convening**

In a culminating event, the Innovation, Culture, and Creativity (ICC) National Convening brought together innovators, researchers, artists, and other leaders to envision new opportunities for joint research, workforce development, and innovation by the creative and technology sectors.

Over two dynamic days at UCLA's Luskin Conference Center, participants engaged in thought-provoking discussions, collaborative workshops, and hands-on ideation sessions designed to inform new research directions, programmatic ideas, and potential partnerships with the National Science Foundation (NSF) and other agencies. This convening built on insights from regional workshops across the U.S. and aimed to create actionable strategies for a thriving, inclusive future in creative and tech ecosystems.

# **About Innovation, Culture and Creativity**

Foster meaningful engagement of the creative sector with the national R&D enterprise.

# ICC program's desired outcomes:

- 1. Create a proposed roadmap and value proposition
- 2. Propose new models for cross-disciplinary R&D
- 3. Identify and influence research agendas and infrastructure opportunities
- 4. Build a network of organizations and individuals

This project is supported by the **National Science Foundation** (Award TF-2345797) and **UCLA DataX**.

# **Organizational Affiliations of Convening Participants**

#BlackTechFutures Research Institute

Academy of Motion Picture Arts and Sciences

Adobe

Aeolab / ArtCenter

Apple

Arizona State University

Beyond Ergonomics: Furnishing Healing

Black Tech Saturdays

California Arts Council

**CLTRE** 

CodeCrew

Composition Media

**Creative Startups** 

**Crosstown Connection** 

CUNY (BMCC/The Graduate Center)

**CVL Economics** 

**Design Justice** 

**Design Justice Network** 

Disney Research Imagineering

Dr. Cathy Thomas

DreamHouse 'Ewa Beach Public Charter School

**Expressive Computation Lab at UCSB** 

General Intelligence

**IATSE** 

Institute for the Future

KC Digital Drive

KC IMAGINE

LA County Department of Economic Opportunity

Metropolitan Arts Council of Greater Kansas City

dba ARTSKC, Regional Arts Council

Monash University

MovieLabs

MTH Studio

National Endowment for the Arts

**National Science Foundation** 

New Art City

**New Mexico Creative Industries Division** 

NNMD

Orange Coast College

Partnership for Southern Equity

Phillips & Co.

Prairie View A&M University

**Processing Foundation** 

Qualcomm

Rad Works

Robert Wood Johnson Foundation

rootoftwo

Runway

Simcia Security

South Florida PBS

Stillman College

**TEC Leimert** 

Television Academy

The Graduate Center CUNY

The Music Center

The Music Center/Performing Arts Center of Los

**Angeles County** 

The U.S. National Science Foundation

**UC Santa Barbara** 

**UCLA** 

UKRI Arts and Humanities Research Council

Union Temple Baptist Church

**Universal Pictures** 

University of Hawai'i

University of Missouri-Kansas City

University of Southern California

**Urgent Futures** 

**US** Ignite

Walt Disney Imagineering

Wayne State University

West Point Music Research Center

Willamette University

# **Agenda: Day 1**

Welcome Day 1

9:00 - 9:20

Plenary - Ballroom A/B

Speakers: Gracie Narcho, Chaitan Baru, Roger Wakimoto, Jeff Burke

#### **Regional Workshop Recaps & Outcomes**

9:20 - 10:00

Plenary – Ballroom A/B

Emcee: Lauren Lee McCarthy

Speakers: Alice Loy, Fallon Wilson, Jason Leigh, Aaron Deacon, Wesley Taylor, Bertie

Ferdman, Rashidi Jones

Facilitators:
Amy
Meginnes &
Marlene
Ramirez
Cancio
10:00 - 11:00
Innovation
Speakers:
Bertie
Ferdman &
Peter
Eckersall &
Michael Byrne
NYC
Topic:
Dramaturgical
strategies for
Al and XR
1

#### **Break**

11:00 - 11:15

#### Opportunity Spaces → Translational Research

11:15 – 12:00

Breakout 1 Ballroom A/B	Breakout 2 Odyssey	Breakout 3 Pathways	Breakout 4 Innovation	Breakout 5 Catalyst (2)
<b>Topic:</b> Urban Technology	Topic: Diversity & Social Justice	Topic: Tool-Makers	Topic: Public Media	Topic: Select In Session
<b>6</b> ,		Facilitator: Chris	Facilitator: Amy	
Facilitator: Lauren Lee McCarthy	Facilitators: Jennifer Jacobs & Justin Daab	Johanson & Jessica Glennon	Meginnes & Greg Pottie	Facilitator: Chris Johanson
<b>Speakers:</b> Cezanne Charles & John Marshall	Speaker: James Scruggs	Speakers: Lisa Jamhoury, Torin Jones, Joel Kwartler	Speakers: Sadah Espii Proctor	Speakers: N/A

#### Lunch

12:00 - 1:00

#### Flipping the Future

1:00 - 1:45

Plenary – Ballroom A/B

Emcee: Jeff Burke

Speakers: Wayne Pan, Rod Falcon

#### Mapping Future Forces: Creative + Tech Ecosystems

1:45 - 2:45

Plenary – Ballroom A/B

Speakers: Wayne Pan, Rod Falcon

#### **Break**

2:45 - 3:00

#### **Short Talk + Team Presentations**

4:15 - 5:00

Plenary – Ballroom A/B

#### **Reception & Discotech**

5:00 - 7:00

Centennial Terrace (Floor 3)

Discotech Facilitator: Design Justice Network

# **Agenda: Day 2**

Warm Up Activity: Reimagining Tech Hubs and Human Connectivity

8:20 - 8:50

Plenary – Ballroom A/B

Leaders: Trice Clark and Lex Caldero

Welcome Day 2

9:00 - 9:10

Plenary – Ballroom A/B

Speakers: Jennifer Jacobs and Matt Phillips

**UKRI Creative Industries Clusters Programme** 

9:10 - 9:30

Plenary - Ballroom A/B

Intro Speakers: Jennifer Jacobs

Intro: Jax Deluca

Speaker: Christopher Smith (remote)

**Opportunities via Current NSF Programs** 

9:30 - 10:30

Plenary - Ballroom A/B

Speakers: Greg Pottie and Matt Phillips

Ballroom A/B	Innovation	Catalyst (2 <sup>nd</sup> floor)
Topic: Education and	Topic: Entrepreneurial	Topic: Society Focused
Workforce Development	Programs	Programs
Facilitators: Chris	Facilitator: Jennifer Jacobs	Facilitator: Greg Pottie &
Johanson & Jessica		Amy Meginnes
Glennon	Speakers: Gracie Narcho	
		Speakers: May Yuan
Speaker: Kevin Clark		
\ I	Vorkforce Development Facilitators: Chris ohanson & Jessica Glennon	Workforce Development Facilitators: Chris ohanson & Jessica Glennon Facilitator: Jennifer Jacobs Speakers: Gracie Narcho

#### **Break**

10:30 - 10:45

#### **New Models, Programs and Partnerships**

10:45 - 11:45

Breakout 2 Innovation	Breakout 3 Ballroom A/B	Breakout 4 Catalyst (2 <sup>nd</sup> floor)	Breakout 5 Discovery (2 <sup>nd</sup> floor)
<b>Topic:</b> Building a Black Public Interest Tech Workforce	<b>Topic:</b> Ethical Creative Technology	Topic: Community Open Data	<b>Topic:</b> Bridging Emergent Tech & Creative Practice
Facilitators: Jeff Burke & Amy	Facilitator: Jennifer Jacobs & Matt Phillips	Facilitator: Lauren Lee McCarthy	Facilitator: Greg Pottie
Speaker: Fallon Wilson, Isaac McCoy	<b>Speakers:</b> Alex Porter	Speakers: N/A	Speakers: N/A
	Innovation  Topic: Building a Black Public Interest Tech Workforce  Facilitators: Jeff Burke & Amy Meginnes  Speaker: Fallon	Innovation  Topic: Building a Black Public Interest Tech Workforce  Facilitators: Jeff Burke & Amy Meginnes  Speaker: Fallon  Ballroom A/B  Topic: Ethical Creative Technology  Facilitator: Jennifer Jacobs & Matt Phillips  Speakers: Alex Porter	Innovation  Ballroom A/B  Catalyst (2 <sup>nd</sup> floor)  Topic: Building a Black Public Interest Tech Workforce  Facilitators: Jeff Burke & Amy Meginnes  Ballroom A/B  Topic: Ethical Creative Technology Community Open Data Facilitator: Lauren Lee McCarthy Speakers: Alex Porter  Speakers: N/A

#### Lunch

11:45 - 12:45

#### Plenary Talk + Exercise

12:45 - 2:15

Plenary - Ballroom A/B

Plenary Talk Speaker: Kevin Clark Exercise Facilitator: Matt Phillips

#### Break

2:15 - 2:30

#### **Program Office Greenfield**

2:30 - 3:15

Breakout 1	Breakout 2	Breakout 3	Breakout 4	Breakout 5
Odyssey	Ballroom A/B	Innovation	Catalyst (2 <sup>nd</sup> floor)	Discovery (2 <sup>nd</sup> floor)
Topic: Regional	Topic:	Topic: Economic	Topic: Distributed	Topic: Workforce
Innovation	Entrepreneurship	Competitiveness	Communities of	Development
			Practice	
Facilitators:	Facilitators:	Facilitators:		Facilitators:
Greg Pottie, May	Jennifer Jacobs,	Jeff Burke, Allyson	Facilitators:	Chris Johanson &
Yuan & Amy	Kevin Clark & Matt	Kennedy & Jessica	Lauren Lee McCarthy	Chaitan Baru
Meginnes	Phillips	Glennon	& Jax Deluca	

#### **Small Group Presentations**

3:45 - 4:00

Plenary - Ballroom A/B

#### **Concluding Thoughts**

3:45 - 4:00

Plenary - Ballroom A/B

Speakers: Jeff Burke & Jennifer Jacobs

# Regional Workshop Recaps and Outcomes



# **Day 1 Plenary Session Notes**

# Three of our goals (in part of a value creation framework) will include:

- Workforce development and job creation
- Regional innovation ecosystem where are there levers that you all need between the work you are doing and the development of technology?
- Economic opportunity global economic competitiveness and what is the role of the creative sector?

#### Ideas can include:

- Industry and economic growth
- Culture change of how academia views this work (promotions, partnerships, entrepreneurial advancement)
- Place based innovation
- Research has been focused on universities in the past (awards are up to \$160M over 10 years)
- NSF has funded great research at universities labs come out and say what are we going to do with this? What problem does this solve? We are trying to ask in in reverse. What are the problems and challenges by region and what are the critical technologies needed to meet those challenges

# **Day 1 Plenary Session Notes**

# Ideas can include (continued):

- Innovate within Government:
  - New ways of reaching non-traditionally NSF communities
  - The way we fund
  - New ways of risk
  - How we grant
  - Developing a talent group that hasn't engaged in STEM before
- Partnering with industry, philanthropy and other nations (Innovating the way we work)
- Could there be a spoke and hub system?

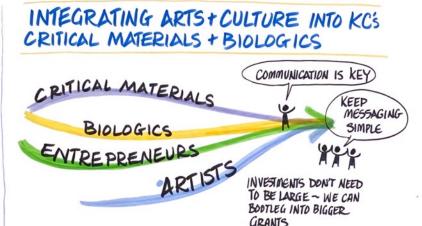
# Regional Workshop Breakouts

In seven breakout sessions, workshop leaders were able to lead a discussion that dove deeper into the ideas and findings from their regional workshop topics.

# REGIONAL WORKSHOPS BREAKOUTS







# DREAMING OF ETHICAL BLACK AL ECOSYSTEMS THROUGH BLACK JOY



# INDIGENOUS PATHWAYS TO PLANNING SUSTAINABLE FUTURES





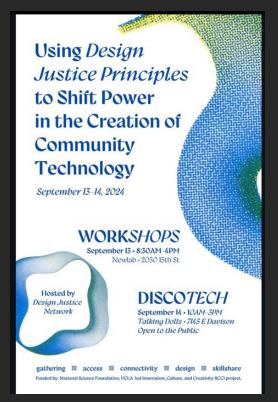


















# **Breakout Session One**

**Integrating Indigenous Knowledge** and Creative Computational Media:

Building a Sustainable Innovation Ecosystem in the Pacific Rim

# **Led By**

**Jason Leigh** 

**Professor** 

University of Hawaii at Manoa

#### Regional Workshop Snapshot

#### Workshop Location

Integrating Indigenous Knowledge and Creative Computational Media:

Building a Sustainable Innovation Ecosystem in the Pacific Rim

Academy for Creative Media Bldg, University of West Oʻahi, Kapolei, Hawaiʻi

#### Description

- Goal: conceptualize a sustainable innovation ecosystem, that incorporates Indigenous knowledge and creative computational media, providing NSF recommendations.
- Showcase of ancestral & future perspectives, group discussions on Indigenous research, and creative workforce development.
- Attendees: Indigenous practitioners and artists, Industry professions from film & video game sectors, Academics specializing in creative computational media & indigenous studies, Government & funding representatives.

#### Key Takeaways

- Major Themes:
- Indigenous Epistemology, Biocultural Restoration, Creative Computational Media as primary underpinnings for an innovation ecosystem for the Pacific Rim.
- Indigenous Epistemology: understanding traditional ecological knowledge, ancestral ways of knowlng, and biocentric practice and values.
- Biocultural Restoration: Utilizing creative technologies to restore cultural heritage & foster ecosystem (environmental as well as workforce) sustainability.
- Creative Computational Media: Advancing tools & techniques for digital media production (e.g. VR, AR, Generative AI, Data Visceralization).
- Equity & Inclusion: Prioritizing co-design & co-production of R&D with Indigenous communities. Respect & protection of indigenous intellectual property.
- · NSF Considerations:
  - Invest in Indigenous Creative Computational Media Innovation hubs for research, workford development, & cultural preservation.
- Support indigenous-led Research integrating traditional knowledge & emerging
  technologies.
- Advocate indigenous-sensitive review criteria in grant applications
- Enhance collaborative networks globally to amplify knowledge-sharing & scalability

Organizing Committee: Jason Leigh1246, Kamuela Enos³, Chris Lee², Nurit Kirshenbaum514, Kari Noe134, Shivani Tanaka6, Tyra Bailey124

\*Laboratory for Advanced Visualization & Applications, \*Academy for Creative Media System, \*Office of Indigenous Knowledge & Innovation, \*Creativity and Technology Lab, \*Newari Data Science Institution\*

\*Laboratory for Advanced Visualization & Applications, \*Academy for Creative Media System, \*Office of Indigenous Knowledge & Innovation, \*Creativity and Technology Lab, \*Newari Data Science Institution\*

ICC National Convening

Link to presented content

# **Breakout Session Two**

# **Inclusive Innovation:**

Engaging Creative Technologists for Advanced Technology Tools Research and Initiatives

# **Led By**

**Paris McCoy** 

CTO

TEC Leimert

# **Rashidi Jones**

Executive Director TEC Leimert





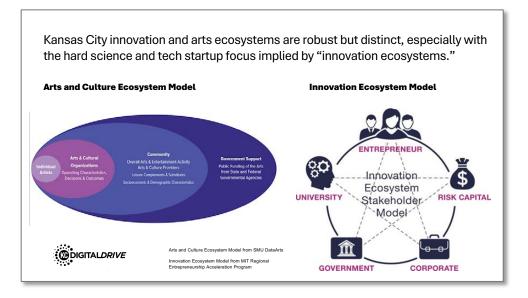
# **Breakout Session Three**

# Integrating Arts and Culture into KC's Critical Materials and Biologics

# **Led By**

**Aaron Deacon** 

Managing Director KC Digital Drive



"Critical materials" and "biologics" offer place-specific context for exploration; but the workshop design, themes, and outputs are generalizable to art + science.

#### **How We Got Here**

- NSF Regional Innovation Engines development awards and EDA Tech Hub designations for specific industry sectors
- Hundreds of stakeholder orgs in consortium initiatives – few/none related to arts and culture
- Workshop opportunity emerged out of Critical Materials Crossroads





- What We Did
- Examine the path of the artist, science researcher, and tech entrepreneur as parallel creative processes
- · Museum tour / artist panel
- Journey mapping of R&D and tech creative process
- · Look for points of intersection
- Develop ideas for specific interventions



UMKC to Lead Development of Energy Materials Campus in Kansas City

Critical Materials Crossroads, on behalf of UMKC, advances a finalist for National Science Foundation Regional Innovation Engines Type II Award - up to \$160M over 10 years. BioNexus KC Announces KC Region Tech Hub Designation For Biologics And Manufacturing Proposal

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# **Breakout Session Four**

Dreaming of Ethical Black Artificial Intelligence Ecosystems through Black Joy

# **Led By**

# **Fallon Wilson**

Founder #BlackTechFutures Research Institute

# Isaac McCoy

Dean, School of Business, Entrepreneurship, and Computational & Information Sciences Stillman College



# **Breakout Session Five**

# **Indigenous Pathways to Planning Sustainable Futures**

# **Led By**

**Alice Loy** 

Co-Founder & CEO **Creative Startups** 

# **INDIGENOUS**

#### PATHWAYS TO PLANNING SUSTAINABLE FUTURES



Indigenous

desian planning nstitute

How might our communities . . .

- · Effectively engage Native American artists and creatives in designing and building smart, equitable, sustainable communities?
- · Increase rates of scientific and/or technological discovery and diverse participation in STEM fields?
- . Leverage our unique regional culture and norms to unlock smart, equitable, sustainable communities-related innovations and technologies?
- · Engage Native American cultural knowledge and norms to spur innovation in city and regional planning?



- · Engage Native American artists and creatives
- Increase scientific and/or technological discovery
  - Rethink ways of knowing including
- 7. Utilize artist projects to connect citizens to complex science topics

1. Adopt holistic

practices.

approaches that

4. Embrace alternative

scientific inquiry

frameworks for

approaching

recognize and uplift

Indigenous ways of

knowing and cultural

- traditional and intuitive ways of knowing
- 5. Use creative tech as enablers of artistic expression to grow cultural sovereignty and empowerment
- Orient sustainability priorities around Seven Generations

- Leverage our unique regional culture
- · Engage Native cultural knowledge
  - Increase Indigenous engagement in STEM through focusing on sovereignty and empowerment
  - Expand knowledge of decentralized organizational structures and data sovereignty

Rather than simply being invited to the table, Indigenous leaders, artists, and technologists must have the agency to shape the agenda and determine the outcomes.

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# **Breakout Session Six**

# **Design Justice:**

Using Justice Principles to Shift Power in the Creation of Community
Technology in Detroit

# **Led By**

# **Wesley Taylor**

Steering Committee Member Design Justice Network

# **Nour Arafat**

Steering Committee Member Design Justice Network



Link to presented content, photos

# **Breakout Session Seven**

Developing Dramaturgical Strategies for Al and XR alongside NYC's Contemporary Performance Scene

# **Led By**

**Bertie Ferdman** 

Professor
CUNY (BMCC/The Graduate Center)

# **Peter Eckersall**

Professor
The Graduate Center CUNY

# **Michael Byrne**

Creative Lead for Tech, Arts and Culture Cornell Tech







# Name of the Concept: Funding Tech/Arts Projects

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Linking and being inspired by different innovation methodologies in tech and the arts

# Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Fund arts projects with technological aspects
  - Can have tech reviewers for arts projects and vise versa
- Enable proposals to exceed 'the box' with justification; potentially inter-agency cooperation

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

- NSF, NEA
- State and local science and arts funding agencies (Also private foundations)



# Name of the Concept: Field Building: How to Build with Connection and Scale with Focus

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Transferring what works in creation econ riches in CA to other regions

# Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Strengthening national network for practice sharing and contacts connection
- Providing 'backbone' organizational effort with a strong focus on connecting people and building relationships that can cultivate field
- Can lead to identify and focus agenda and build strategy that national networks can scale

## **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Inclusive Innovation / Josephine Ramirez (ask me about field building research and strategy development)



# Name of the Concept: National Media Skills and Entrepreneurship Collaboration

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Export TEC Leimert's success model to other regions with digital media workforce development initiatives
  - Share their "industry currency" with regions that don't have the level in California
  - Identify what "currencies" are available in other regions that can be shared (e.g. Memphis – music and KC – sports entertainment)

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Provide research and grants that facilitate cross regional collaboration
- Support efforts to promote adding the "A" to STEM
   Insert K-12 programs to expend career awareness programs for "A" careers like digital media at the Middle School level.

   High School can be too late

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- TEC Leimert
- National digital media companies (Adobe, Sony, etc.)

Breakout/Concept Authors: Inclusive Innovation / Ron Green



# Name of the Concept: Creative Economy Dashboard/Database

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- The challenge is the connection between regional efforts and successfully create a broad network to connect different creative economies across the country
- Also want to be very careful in not creating a monolithic understanding of the skills/creativity needed to fill this gap
- Opportunity to create/connect regional creative economies and build larger, diverse networks across the country

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Access dashboard
  - A public dashboard/database that provides access to regional, state, and national levels and is trained with data from different levels/creative economies
  - Provides stronger connection between tools/makers

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Regional
  - Community/creative cooperatives
- State
  - Institutions education and government
- National
  - NSF or other agencies

Breakout/Concept Authors: Inclusive Innovation / Alex Porter, Trice Clark



# Name of the Concept: X-National Collaboration

## **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

 Enabling cross-national collaboration as every state has a different history and resources

# Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

Creating a cohort of organizations, with funding, for initiatives

# **Key Partners**

Who else could be involved at the regional, state, and national levels?



Name of the Concept: Connection

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Connect innovators with creatives and artists to address their new technology inspired by the creative community

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Regional creative hubs that bring together artists, technologists, and sponsors

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Creative workers and artists guilds
- University research groups, startups
- Technology orgs: HPA SMPTE Women in Tech Hollywood, MovieLabs
- Sponsors: studios, tech companies (cloud provider, tool providers, chip makers)



# Name of the Concept: Solidifying and Illustrating the Opportunity

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- NSF is already funding a lot of organizations across the country – who are already creating frameworks, pedagogies and best practices
- NSF however isn't platforming these in an impactful way that would amplify awareness, bottle results and spark collaboration and communities

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Make a repository of case studies, everyone who completes a grant – present your work and your findings
- Create an amplification of those proclaims – TED NSF anyone?
- Make repository
- Create opportunity connections are you proposing a STEM incubator?
- Create framework of national events that play off the local orgs that are working up new results

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Regional:
  - Schools, community colleges
  - Community orgs
  - Local art/performance orgs
- State:
  - Government
  - Universities
  - Education departments
  - Community orgs
- National:
  - Government
  - Arts

Breakout/Concept Authors: Inclusive Innovation / Julian Rad



# Name of the Concept: Regional Collaboration

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Regional collaboration in which the assets of one region benefit another and vise versa
- How different disciplines/interests collaborate

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Replicate the model of this workshop/grant with other constituents: STEM and sports: STEM and Humanities; STEM and public institutions (museums, etc.)
- Conference on what collaboration looks like

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Universities and non-profits; professional associations for specific disciplines
- Unlimited constituents



# Name of the Concept: Cross State Initiatives

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- How to capitalize on
  - Localization
  - Culture
  - Local creative

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Feeder programs
- Identify similar initiatives that have the same values, connect these as a crossstate initiative
- 18-28

## **Key Partners**

Who else could be involved at the regional, state, and national levels?



Name of the Concept:

Leveraging Local Socio-entertainment Currency to Promote STEM and Workforce Development

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Building STEAM and workforce development initiatives
- Intersecting with local entertainment to enhance and promote STEAM and workforce development
- Accessibility to these/this currency

# **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

- Connect dollars to STEAM and workforce development initiatives to enhance their ability to leverage local socio-entertainment currency
- Pursue and fund ways to scale this

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

 Local high-profile music, arts, and sports initiatives and producers (even minor leagues)



# Name of the Concept: Creating Space for Art for Art's Sake

# **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

 The "space" for pursuing "art for art's sake is shrinking

# Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

Increased grant funding

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: AI/XR



# Name of the Concept: Raising Awareness of Al Energy Usage

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

Energy requirements and drain is invisible

# **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

 Use art and tech to educate and raise awareness around the approaching energy crisis

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: AI/XR



# Name of the Concept: Opportunities for Scientific Collaboration

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 The scientific community doesn't have international opportunities to collaborate, to hear from communities, and "be creative"

# **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

 Conferences, collectives, communities to facilitate ways of scientific collaboration on a regular basis

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: AI/XR



# Name of the Concept: Ethical Al Based on the Performance Process

#### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

- Training AI on "left out" perspectives
- Consider the performance process to integrate a broader range of perspectives

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?



Name of the Concept:

Learning from the Actor Experience to Combat Mental Health Challenges with Technology

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Actors can experience an alienating experience
- How can those lessons help guide gamer and VR development

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Communities/tech learning based on the actor experience to shape safer gaming and tech environments

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Cascading Media and Lowering Barriers

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 People often experience "immersive" experiences via video – later

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Tech requires power, connectivity, expensive equipment
- Is there a way to cascade experiences for a broader reach or lower the barriers to accessing immersive art and tech

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Sharing ARTECHED Early

#### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

Training happens in schools, not communities

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- School curriculum that integrates and highlights arts and immersive tech
- Sharable education experiences

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Schools



# Name of the Concept: The Big Arts and Science Campaign

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Evangelizing and popularizing to increase recognition of the importance
- Public policy and Big Rock hurdles

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: NSF "Library" of Tech Resources

#### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

#### **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

 NSF "library" of tech and resources for art/XR/Al research

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: New Channels for Corporate Funding

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Creating channels for more corporate partners and grants

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Integrating Solution with Existing Tech

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Off the shelf XR for teachers with tech that fits with existing technology
- Immersive tech with "Google Slides"

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Tech Standardization

#### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

- Reaching the masses
  - No standardization
  - Not built to travel
  - Expensive
- Challenge: what about scale is important

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

Creating standardization

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Reusable Tech and People

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 An organization that supports artists to create new works: innovation studio style

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Create deployable teams of experts in innovation, tech, problem finding, etc. facilitators and then pay them to wrap around and support artists

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Stress Testing Tech with Performance

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Immersive art production as mechanism for stress-testing/innovation of XR hardware

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Support funding for existing trusted groups to partner with a company to make a work
- Hire researchers to document technical challenges and innovations, made by artists during production

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

 Industry partners who are leading development to provide hardware, benefit is that they get knowledge and marketing benefits based on the outcomes of networks

Breakout/Concept Authors: AI/XR / Jennifer Jacobs



# Name of the Concept: Accessible Hardware and Tech Tools

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Lack of access to high end technical hardware for different groups of creators

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Rotating instrumentation grant group of different artists propose instrumentation grant in XR an then share the resources, arming them for multiple creative works

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

 Educational institutions, could be a training/workforce development component where students learn about XR development from artists



# Name of the Concept: Using Performance to "Break" Tech

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 The high standards and demand of arts/performance as a testing mechanism to find the limitations of scaling

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Partnership facilitation between new tech and the arts

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Regional Arts Incubators

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Incubator
  - Education skills in shortage
  - Arts storytelling
  - Technology AI/XR media to make education more accessible

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Create incubator
  - Leverage storytelling and make tech more accessible

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Performing arts industries
- Entertainment sector
- University
- Science partners



# Name of the Concept: New Financial Structures Leveraging Public and Private Incentives

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Today it is difficult to coordinate resources when needs frequently change

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Leverage private and public partnerships to reduce risk in product development for reg. arts organizations to experiment/try out new and emerging tech

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Regional incubators
- Incentive private industry investment



# Name of the Concept: Anchor Institutions

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Anchor institutions in community
- Trust building
- People-centered approach

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Community outreach grant
  - Move beyond gap between university and community (hyper local)
- NSF Pathways Community
  - Partnerships
  - Language match
  - Introductions
  - Relationship
  - Hack-a-thon event
- NSF can invite folks to the issues they are already working on

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Anchor institutions beyond universities
- YMCA
- Churches
- Business folks
- Locally focused non-profits
- (Existing networks)

Breakout/Concept Authors: Indigenous Pathways



# Name of the Concept: Embedded Disability Justice

#### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- "Alternate" ways of thinking about time
- The only minority anyone can become at any time

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Indigenous Pathways



# Name of the Concept: Black Tech Futures Matter

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Naming Conventions names matter
- Logistics focusing on post event experience
- Future of Black communities
- Health (mental, physical, spiritual) of blocks in tech companies (FAANG'S) and startups
- Afrofuturism focus on Black communities, but tech coined by white men

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Digital equity
- Digital infrastructure
- Access to communities and organizations

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Black Tech Futures
- HBCUs
- Black entrepreneurship support orgs
- Black multi-fait institutions
- Black tech organizations
- Black public interest tech orgs
- K-12 STEM/STEAM orgs

Breakout/Concept Authors: Ethical Black AI / James Scruggs, Marco Robinson, Angel Clark



# Name of the Concept: Digital Infrastructure

#### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

Digital Infrastructure

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Change the narrative and open the gates around the separation of STEM and creative fields

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Specifically, immigrant and BIPOC funds/orgs/hubs

Breakout/Concept Authors: Ethical Black Al



# Name of the Concept: Digital Alchemy/Promoting Digital Infrastructure and Equity

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Opportunity to reconnect genealogy, data, identity and cultural history to mobilize Black technologist to build the infrastructure we need

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Financial resources to mobilize at scale, invest in Black-led organizations and communities to do the work

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Churches
- HBCU/PBI's
- Cultural centers
- Performing arts
- #BlackLivesMatter / Black digital technologists

Breakout/Concept Authors: Ethical Black Al

# Opportunity Spaces Translational Research

Breakout sessions were organized by workshop participants and other guests to explore a new set of perspectives and imagine translational research that could be undertaken in each.

# Translational Research

"converting discoveries, often made in a laboratory or other setting, into practical applications that can be deployed at scale..."

# OPPORTUNITY SPACES

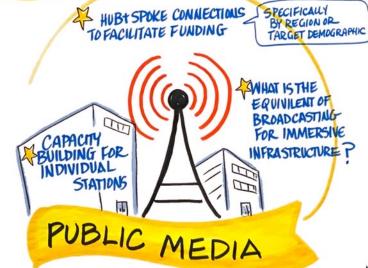


#### and IDEATION



PLACE PEOPLE
IN EXPERIENCES TO
SEE A NEW WAY OF
UNDERSTANDING







# **Breakout Topic One**

# **Urban Technology**

# **Led By**

#### **Cezanne Charles**

Partner rootoftwo

#### John Marshall

Partner rootoftwo







#### Undar-imaginad Futuras hava consaquancas.

- We use participatory design methods to create innovative and tangible experiences, events, artifacts, spaces, methods, and
- We have over two decades of experience designing and delivering projects and services grounded in design, research, technology, public policy, and cultural development
- rootoftwo imagines, facilitates, 6 shapes collective actions for more equitable futures (interviews, focus groups, case/precedent studies) and quantitative research
  - We develop related themes, narrative cases, scenarios, and frameworks
  - We create prototypes to test ideas and assumptions physically, conceptually, and contextually with stakeholders

  - We do our homework
    We don't start "from scratch"
    We take our time





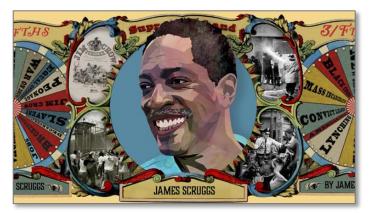
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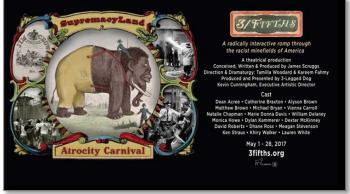
# **Breakout Topic Two**

**Diversity and Social**Justice

# **Led By**

James Scruggs Artist













Link to presented content

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# **Breakout Topic Three**

### **Tool-Makers**

# **Led By**

## **Lisa Jamhoury**

Artist
Onassis ONX, NYU, NEW INC

#### **Torin Jones**

UX Researcher Adobe

#### **Joel Kwartler**

Group Product Manager Runway

# **Breakout Topic Four**

**Public Media** 

# **Led By**

**Sadah Espii Proctor** 

Director, Immersive Media South Florida PBS



# Name of the Concept: Expand Alternative R+D Models

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Connect strategy (5-10yr) to 3-month development model (mid-term waypoint)
- No standards exist in the space of alternative R+D (recognize that standardization approaches will be necessary in the future)
  - Ex. ethics, sustainability, technical, etc.
- 3. Arts are often excluded from policies and supportive credits and incentives

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Support project that lead toward standards creation for alternate models for R+D, especially open-source opportunities
- Maintain creative spaces, while working toward creation of supportive standards that do not squelch creativity
- Award/reward examples of PDM, especially those that include arts in the full R+D process
- R+D tax credits that can involve the arts create potential

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Creative sector professionals (VC, publicly traded)
- NSF/TIP
- Non-product related creatives
- Commercial partners and administrative assistance
- Legislative (policy) executive
- Industry and trade associations (Society of motion picture engineers, American society of cinematic academies) and guilds/societies

Breakout/Concept Authors: Tool-Makers / Expanding R + D D4 Dev Models. Jeremy Schlegel, Adam Fowler



# Name of the Concept: Tool Makers for Tool Makers

#### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

 Enable artists and creators to make their own tools then present the tools and iterate in cohorts

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Tools follow creative output
- So, help people make creative tools who haven't had access before

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Adobe

Breakout/Concept Authors: Tool-Makers



Name of the Concept: TOOS

#### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

 Problem: Corporate tools are set up in proprietary ways

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Getting funding to large number of artists who use tools like Runway and "Outside" that tool's corporate interest
- Scaling it to pay artists and make it valuable for tool maker/technology

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Tool-Makers



## Name of the Concept: Creative Tech Hubs/Labs

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 How might we bring people interest in data collection/data sovereignty/data trusts to create more community-let and controlled tech / public interest tech

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Create public interest and creative tech hubs/labs that look at:
  - Data governance (digital rights x human rights)
  - Spatial web
  - Public interest tech

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Artists
- Designers
- Libraries
- Community and economic development organizations
- Artist's collectives
- Digital inclusion offices in municipal governance
- Universities

Breakout/Concept Authors: Urban Technology / Cezanne Charles



# Name of the Concept: Citizen Data Empowerment and Ownership

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Citizens could play more significant roles in shaping community/urban development through open data / co-op data models
- Data ownership + co-op ownership + data citizenry

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Fund studies into alternative data collection, data use, data ownership models

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Cities/countries
- Data scientists
- Industry data collectors (Shopify, Google, etc.)

Breakout/Concept Authors: Urban Technology / Alice Loy, Cezanne Charles



# Name of the Concept: Elastic Solicitations

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

Allow high value innovation in response to solicitations

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Allow proposals that innovatively expand the solicitation "box" of requirements to accommodate high value innovation

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

 Other agencies and partners who have rigid solicitation requirements

Breakout/Concept Authors: Urban Technology / Glenn Ricart



# Name of the Concept: Digital Redefinition of Physical Spaces

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- How technology development changes the nature, experience, and perception of place?
- What are the implications of those changes for planning and governance?
- Ex. of tech development:
  - Drone, robot, AV ability to physically move through space without people
  - · Geofencing of machine capability
  - AR for digital overlays
  - Place defined by contiguous and standardized data sets

#### **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

- Dedicated funding for research
- Workshops/convening
- Add as a branch of SC + C solicitations
- Convergence accelerator topics

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- US Ignite
- MetroLab
- National Smart Coalitions Partnership
  - Regional innovation intermediacies
- Local Government
- Corporate community especially infrastructure and data

Breakout/Concept Authors: Urban Technology / Aaron Deacon



# Name of the Concept: Federal Creative Economy Data Infrastructure

#### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Urban Technology



Name of the Concept: Red Light Districts for Innovation (Is it a good thing or a shit-show?)

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Geospatial disruption convergence accelerators
- Human-built infrastructure as geography
- Societal benefits cannot be made by scientists alone

#### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- How to create new metrics and indicators?
- How to keep/make places the community wants
- Analysis of 'coded' language of community development/innovation rhetoric

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

People that live and work in place

Breakout/Concept Authors: Urban Technology / Everyone Everywhere All of the Time



# Name of the Concept: Painful Paths to Joyful Futures (Bridging Tech and Historical Trauma)

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Visualizing historic data lakes to restore knowledge and data empowerment to catalyze growth (healing)

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Funding data research and creative performance
  - Infrastructure
  - Creative performance

## **Key Partners**

Who else could be involved at the regional, state, and national levels?

- NEA
- NEH
- Dept. of Interior

Breakout/Concept Authors: Diversity and Social Justice /

Shani Harvie, Jack C. Robertson, Payton Croskey, Megan Van Voorhis, Fallon Wilson, Kamal Sinclair, Greg Pottie, Charlton McIlwain



# Name of the Concept: Brave Space vs. Safe Space

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Brave space vs safe space
- Scientist to support the work of artists theatre/performance
- Can scientist help do the science in relation
- Technologies created by Black folks that circumvent normative spaces/modalities/surveillance systems
  - Hush Harbor
  - Ring Sheet

## **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

## **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Diversity and Social Justice



Name of the Concept: Platforms

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 The need for platforms to help us find each other so we can collaborate, meet in person

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Focus on the local
- Ways of knowing form initiative to scientist's research study

## **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Applied research
  - Usable
  - Deployable
- Theoretical research
- Basic research

Breakout/Concept Authors: Diversity and Social Justice / Marlene Ramirez Cancio



Name of the Concept: James

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Get NSF to find people like James Scruggs
- Train people like James to unite proposals that NSF will find in existing programs

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- NSF Program officer training where they are required to go experience sociopolitical artist performance created by underrepresented artists
- NSF grant for doing grant training for artists for NSF

## **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Arts organizations that identify meaningful artists/projects
- University

Breakout/Concept Authors: Diversity and Social Justice



# Name of the Concept: Relationships

## **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

- NSF and funders do the work to better support social justice centers
  - Adaptive leadership
  - Technical censorship
- Relationships for inclusive innovation

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Get to know and understand the social justice centers
- · Rethink their funding criteria

## **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Diversity and Social Justice



# Name of the Concept: Free to use Physical Spaces through NSF

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

Physical space is expensive

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Out of the box experiences able to be dropped into existing infrastructure
- Collection of real estate properties accessible for tech/creative uses

## **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Real Estate
- Local Government



# Name of the Concept: Sharing and Archiving Infrastructure

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Archiving and documenting and sharing immersive experiences across locations is challenging

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Process for documenting and repeating/sharing
- Supporting infrastructure for archiving

## **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Modular Interactive Experiences

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

It's hard and expensive to create interactive experiences

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Invest in training
- Create a framework (step by step) on how to integrate technology to meet multiple goals (education, art, financial return)
- Create modular pieces for interactivity to make it more accessible

## **Key Partners**

Who else could be involved at the regional, state, and national levels?

Schools



# Name of the Concept: Hyper Localization

## **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

 Communities want to see and preserve their own legacies, particularly those underrepresented in more mainstream media

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

Funding hyper local

## **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Modular Components to Spotlight Local Artists

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Local artists don't have a platform to share their stories or how their trajectory was successful

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Ability to access more funding at a local level to spotlight the arts
- Create modular components that local orgs can plug into

## **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Increasing Local Capacity with Shared Infrastructure

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Individual stations don't have capacity and resources
  - (Same challenge for communitybased resources)

## **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

- Finance departments or the infrastructures
- Co-working groups that share ideas and best practices across stations

## **Key Partners**

Who else could be involved at the regional, state, and national levels?



## Name of the Concept: Invest in Infrastructure to Enable Scale

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Infrastructure is missing to create MORE for more people
  - Ex. Many reading rainbow episodes that can make info digestible

## **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

- Toolkit
- Model infrastructure investment after the broadcast support from 50 years ago

## **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Hub and Spoke Funding Connector

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- The older generation that grew up watching public media will support, but "give it a generation"
- No geography, demographic organization

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Hub and spoke connector (ex. Neta) to facilitate funding
- Funding resource centers by demographic or region

## **Key Partners**

Who else could be involved at the regional, state, and national levels?



Name of the Concept: Touring and Sharing Projects with a Global/National Network – Equitable Distribution

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Creating strong and realistic sales pipelines for creative performance and technology projects/companies/artists

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Can fund a season's worth of projects with a performance art center focused on creative technology and innovation
- Once the performance art center completes their season, these projects are then presented to an NSF group of partners and institutions to license these projects/performances/exhibitions similar to that of a touring museum exhibit
- NSF can also connect tech companies to find and support these while also selling tickets to the event

## **Key Partners**

Who else could be involved at the regional, state, and national levels?

- AIXR
- MIT, Apple, Google
- Institutions: museums and universities that want more of these types of performances to occur

# Reimagining the Future with the Institute for the Future

Flipping the Future, Mapping Future Forces, Navigating Two Curves of Change



# the FUTURE WE APPROPRIATE

IMAGINE A FUTURE WHERE YOUR FACTS ARE FLIPPED and THAT IS YOUR REALITY

CHANGE THE TAX CODE

WHAT IF BIG MONEY WAS NOT THE DRIVER ?

REQUIRE TAX WRITE OFFSTD GO INTO DISCRETIONARY FUNDS

WORKERS GAINED NEW RIGHTS DURING DANDEMIC

SHIFT IN/LOSS OF TRUST and CREDIBILITY

SOCIAL

BUILD IN REST, TRUST, CARE

4 IS IT BETTER TO GO BACK TO THE OFFICE?

ACCESS ISSUES! WHO IS ALLOWED TO PARTICIPATE P

TRANSITION FROM ANALOG

MEDIA CONSUMPTION HAS CHANGED

STREAMING ACROSS TOOLS

DEVELOP HUMAN TOUCH WITH TECH

A POUTICAL FORCE

FECHNOLOGICAL

MOVIE MAGIC

PEOPLE CONSUME MEDIA AS INDIVIDUALS NOW

OF WEALTH DRIVERS

ADVOCATE FOR DIGITAL SOVEREIGNTY!

DISPARITY POLARIZATION WORLDWIDE

INEQUALTY-DIGHAL DIVID

NATIONS TWINING RISING

SEA LEVELS ENVIRONMENTA

LACK OF DISTRIBUTION OF RESOURCES - REMOVE THE NEED TO "SURVIVE" (FOOD, HOUSING, etc.)

UNIFIED MESSAGING

GLOBAUZATION IS NOT ASSUME? ANYMORE

CHAINS

IMPLICATIONS FOR CREATIVES

NO MORE STORIES>

CREATIVES DO RECIEVE THE BULK OF NSF FUNDING

> AGI DOES ALL IT SAYS IT WILL

BUT... IT'S NOT CONSCIOUS + WE REALIZE WE NEED CREATING THOUGHT DIVERSITY+KNOWLEDGE ARE DRIVERS

> COMMUNITIES CREATE THEIR DWN DATA SETS WHICH BECOME THE NORM

ARTS EDUCATORS HAVE UP-TO-DATE KNOWLEDGE and RESOURCES

PARTHERSHIPS WITH GOVERNMENT

SHARED LANGUAGE VALUES GOALS

MAPPING FUTURE FORCES

REPARATIONS

TO BUILD OUR OWN ...

FOR YEARS.

DRIVERS OF CHANGE

ESTABLISH

PROTECTIONS

BROAD LONG-TERM FORCES THAT ARE SHAPING THE FUTURE NOW

> WE DON'T PROCESS A GLOBAL ECONOMY

Y LOCAL SUPPLY

# NAVIGATING TWO CURVES of CHANGE:

ARTS HAVE

THE SAME RIGOR

AS STEM!

CREATIVE & TECH ECOSYSTEMS





- SILOED PROCESSES
- LACK OF SKIUS / KNOWLEDGE BUILDING
- FEDERAL GOV LEADS
- NATIONAL
- PRODUCTIVITY
- RIGID SYSTEMS
- TOP DOWN APPROACH
- ISOLATION
- SELECTIVE PROCESS

2035

To:

COLLABORATIVE WORK

- PEOPLE UNDERSTAND TEMBRACE CHANGE!
- CREATIVES PLAY A SIGNIFICANT ROLE

  VINIVERSITIES TRAIN CREATIVES
  + SCIENTIST'S

ESSENTIAL TO STEAM

- → ARTISTS+ CREATIVES ARE
- LOCAL GOUS LEAD
- MODULAR
- PURPOSE
- > ELASTIC BOXES
- ICC IS A DIVISION IN TIP
- > SPECIALIZED EXPERTISE IS VALUED
- COMMUNITY CENTERED APPROACH
- INTEGRATION
- OPEN ACCESS



INNOVATION OCCURS
THROUGH COLLABOR ATTOM
WITH DIFFERENT KINDS
OF THINKERS



HEALTH AS SPECIFITY / FOCUS

MELASTIC BOXES

ARTS+ARTISTS ARE
TAKEN SERIOUSLY

ARTS, ETHICACY, AGENCY

RECOGNIZE TALENT OUTSIDE

COMMUNITY OVER COLONIALIZM



YOU CAN KICK OFF A REVOLUTION!



# End of Day 1: Recap, Reflection, and Team Presentations



# **End of Day 1: Reflections**

- "Unity is corporate humility, and humility is recognizing that you can learn from someone else."
- "What is really exciting is the NSF mandate. Often in the creative sector say we are the triple bottom-line—we are the glue. I can see the intersection. At the end, it clearly states that this is about the potential to produce advancements for the American people. We all serve the people of this country."
- "I want to lift up and elevate probably the most dynamic session I had today. I started my day with James
  Scruggs. Getting to be in his session was so dynamic and critical at a time when people are asking us to be safe.
  That is the power we can bring in the creative economy. We can use creativity to challenge these things. I want to
  lift that up."
- "One thing that struck me is how incredibly smart people have been with leveraging new technologies. That is not going the other way. As a technologist, we are not leveraging the artists. We need to do better, and artists need to do better sharing their developments with us."
- "A notion of translation. Translating what we are doing into something the government can understand. We have different ways of measuring success and different processes. We have to translate between these different modes."

# **End of Day 1: Reflections**

- "An observation: you cannot have science without creativity and creativity without science. It seems obvious to me, yet we have to have all this discussion. Relates to Indigenous design. Seemingly obvious conclusions that are not obvious to anyone outside this room."
- "Hearing the different ways of thinking about these really complex challenges has been enlightening. Technology
  research enterprise and creative enterprise. Originally my brain was resisting and as the day has gone on, I have
  gotten more flexible in my mind."
- "STEAM feels like the asterisks of the arts. We are doing different things. The arts and humanities represent a fundamentally different way of knowing. There is a temptation in this environment to fit the arts into a science box. We need to recognize that we are doing different things. What is the difference in the funding? There is a reason we are trying to do that. Why are there billions of dollars over there and only a little bit over here?"
- "Things take time. Thinking about ways of knowing things that are culturally specific that could help all of us."

## **End of Day 1: Reflections**

- "I was in the breakout session talking about AI and XR. We thought of the 3 issues: tech standardizations (bringing things from somewhere else to the US, power conversion, stages), dramaturgy and rigor as a way to technologically develop your pieces, distribution network and licensing:
  - Program 1: Living library of tools. Partnering to get access to the prototyping materials and then the artists that play with the tools add to the library of knowledge.
  - Program 2: Actor isolation. This could be translated into a mental health and wellness program. Actors or gamers struggling with mental health.
  - Program 3: A program that funds a season worth of work/ performance art that can then be brought to funding that can help that piece travel from x to y to z institution."

# The UKRI Creative Industries Clusters Programme

Christopher Smith of UK Research and Innovation's Arts and Humanities Research Council spoke of key findings from the UKRI Creative Industries Clusters Programme.

Jax Deluca gave an overview of related work from the arts and creative economy at the NEA.

# **Overview of Speakers**

## **Christopher Smith**

Executive Chair
UKRI Arts and Humanities
Research Council

## **Jax Deluca**

Director of Film/Media Arts
National Endowment for the Arts

- Creative Industries Cluster Programme: 9 Clusters
- Infrastructure and Costar
- State funder of research and innovation
  - Fund science and innovation across the UK
- What is a cluster?
  - A long-term investment 5 years of stable funding. An anchor institution will aggregate around itself and work with local partners to grow industry and business
  - Funded 9 clusters over 50 million pounds. The outcome has been stunning. 270 millions pounds of funds raised. 466 startups. Over 5 and a half thousand jobs. 53,000 engagements. The return on the public investment was terrific. We invested in fashion and textiles, one discovered an inventive way to change the weaving process, reducing costs and impact on the environment. Also, really significant impacts in recycling.
  - One of the things that came out of the clusters was we were also able to use that to create the argument for an even bigger investment: Costar

- Costar
  - Gathering together the absolute cutting edge of research and innovation in screen technology
  - Networked with telecoms provider
  - Purpose is to democratize access to cutting edge technology
    - Most people almost never have the opportunity to get access to this kind of technology
- A lot of this is about access to the industry and the ability to get jobs. Through the clusters we
  were able to offer placements to people who would not have had the access before. We were
  able to think about how we can have content production that represents the whole of the UK.
- The UK gov has just launched a new industrial strategy and the creative industries are included in that. We are creating two new clusters. We are at the cusp of a new wave of infrastructure.

- Q&A with Christopher:
  - How does this relate to the catapult program?
    - Digital catapult was involved with one of the clusters and are now aligned with costar. What is
      really exciting for the second wave is how we can use the catapult to generate additional funding.
      Help us address those issues more systematically.
  - The numbers are impressive. How do you measure these outcomes and corollate them to the investment? How do you incentivize the faculties and universities to focus on these goals?
    - UK universities depend heavily on research income. We don't have the same philanthropic environment that the United States and Canada have. We hadn't had a grant structure before and there is enormous interest in the second wave. The creative industry sits in a very interesting place. It will always be artificial to stay down at the low-end research and not try to drive to market. It wasn't straight forward to do what we are doing. Not a straightforward process, we all had to work quite hard to make this work, but I think the timing was right. There is a pull from a large research investment with clear KPIs for innovation.

- Q&A with Christopher:
  - Do the universities buy into this?
    - I think we don't face it the same as in the US. But I do want to say it was a learning curve. A lot of work had to happen behind the scenes to make it work. The issue about clusters is that you cannot just start the clusters, all of them had developed skills over time. If there is a lesson to learn, you have to build where there is skill and willingness.

## Jax Deluca's Talk

- NEA Office of research and analysis:
  - The NEA is the largest funder of the arts nationwide.
  - We are set up to provide jobs and training opportunities for arts and culture. Grants for arts projects –
    a funding opportunity, deadline will be announced soon.
  - I am here to talk on behalf of the head of our office of research and analysis.
  - In our 5-year agenda there is a much longer PDF that shows how we arrived at this. There are some
    overlapping goals of the NSF and NEA.
  - We have a lot of research resources on our website and one of the things that we do offer are grants for arts research.
  - There is no federal agency who tracks the creative economy, so we do some of that research.
  - We have a lot of data, please use it. You can always contact us; we are a small agency, and I am really happy to be here to support everyone.

# Opportunities Via Current NSF Programs

Participants envisioned how existing NSF programs could be expanded or adapted to support innovation at the intersection of the creative and technology sectors in this set of breakouts.

Each breakout introduced a few representative programs across directorates at NSF to kick off the discussion.

# **Overview of Speakers and Topics**

### **Breakout 1**

Technology Focused Programs

### **Led By**

#### **Chaitan Baru**

Senior Advisor, Technology, Innovation, and Partnerships National Science Foundation

## **Allyson Kennedy**

Program Director, Computer and Information Science and Engineering National Science Foundation

### **Breakout 2**

**Education and Workforce Development** 

## **Led By**

#### **Kevin Clark**

Program Director, STEM
Education
National Science Foundation

## **Breakout Topic**

**Entrepreneurial Programs** 

## **Led By**

### **Gracie Narcho**

Deputy Assistant Director, TIP National Science Foundation

## **Breakout Topic**

Society Focused Programs

## **Led By**

## **May Yuan**

Program Director, Social, Behavioral and Economic Sciences National Science Foundation

#### **Allen Walker**

Strategic Partnerships Officer, Directorate for Technology, Innovation, and Partnerships National Science Foundation

# Name of the Concept: Non-traditional Classrooms

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- To breakout of traditional class formats
- The architecture

## **Concept for the NSF**

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Non-classrooms
- Outside of classrooms

**Program Sketch Authors:** 

Session: Education and Workshop Development

**ICC National Convening** 

# Name of the Concept: A 21<sup>st</sup> Century Creative Economy

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 How might we define and measure the creative skills critical for the 21st century?

## Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Redefine outcome from being tied to job and workforce development KPIs
- Refocusing on long term impact vs. short term impact on benefit of creative skill development
- Defining a creative economy strategy through a framework of people, places, and institutions at the regional or local level
  - All could benefit both EDU programs at K-12 and career levels

**Program Sketch Authors:** 

# Building on Today's NSF

Name of the Concept: Rebranding – NSCF

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- NSF is not known for the intersection of data-science and creativity
- Advocating and including creativity from the NSF down will allow the scientific community to come around to the benefits/opportunity of incorporating creativity

## Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Community engagement strategy needs to engage creatives
- Lack of social media
- Creative marketing team
- Who is on the ground?
- NSF needs to tell the story of creativity at work in science to the R+D world, their internal
  analysts, defense companies, and other federal agencies, etc.
- Become the ally
- National Science and <u>Creativity</u> Foundation

Program Sketch Authors: Shani Harvie, Kari Noe, Amber Leon Guerrero,

Nikora Ngaropo, Chris Lee

# Name of the Concept: Embed Creative Storytelling to All Disciplines

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 How to teach skills for creative digital storytelling that transcends disciplines?

## Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Start with youngsters in K-6 with creative storytelling assignments
- "Design a means to deliver your understanding and findings using creative and immersive tech"
- Not just for specific disciplines but intentionally to be interdisciplinary by design

**Program Sketch Authors:** 

# Name of the Concept: Hybrid Classrooms

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Project-based approaches to learning new skills across disciplines or in spaces outside classrooms

## Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Hybrid-classrooms
  - Project i.e., digital storytelling
  - Learning tools and skills to do so
- Public universities
- Community colleges
- Art studios
- Public libraries

**Program Sketch Authors:** 

# Name of the Concept: Knowledge Graphs Systems

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

Movie making is a messy process today

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Knowledge graph has scores, props, finance in one system
- Could fit into open knowledge network?
- Capture semantics and interconnections in one system

Program Sketch Authors: Annie Chang, Chaitan Baru

Name of the Concept: NSF Braintrusts

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Startups may not have all expertise they need

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

 Fund Pixar-like braintrusts to help startups - people can call to help with specific challenges

Program Sketch Authors: Matt Phillips, M Elio, Chaitan Baru

# Name of the Concept: Improving Education Outcomes

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Improving education outcomes across socio-economic levels
  - Self motivation
  - Removing curriculum boundaries
- Leveraging Al/game motivating systems

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Pilot program with middle school group (select)
- Group selected with focus on educational/behavioral issues restricting outcomes
- Supplemental to regular class environment
- Open world classroom
  - Ranking, social intersection
- Curriculum + in-game content development + engineering team
- Craft game environment where curriculum is tied to game mechanics
- Highlight on social elements of M.M.O/Metaverse aspects of games like Roblox/Fortnite
- Instruction + testing + tracking + etc.

**Program Sketch Authors:** 

Name of the Concept: Re-skilling

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Reskilling minority and underserved (and other) communities for increased participation in content production
  - A
  - Virtual production
  - New production methodology
  - Other overlapping content development skills

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

**Program Sketch Authors:** 

# Name of the Concept: Artistic Knowledge as Scientific Knowledge

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Create an avenue to make fundamental claims to artistic knowledge
- (Knowledge tools expressed/embodied in the creation of an artwork)

# **Concept for the NSF**

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Build a connection to funding stream that make available the inclusive and abstract knowledge as a form of experimentation
- Available and established clients
- Science and dramaturgy

**Program Sketch Authors:** 

# Name of the Concept: Cross Disciplinary Research

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Promote cross-disciplinary research between engineering and performing arts

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Mechanisms to help cross-disciplinary teams receive funding for work with both a performance and an engineering output
- Raise artistic outputs (events, shows) to the levels of publishable work
- Promote each discipline to challenge and work with each other
- Artistic questions can be a source for new ways of thinking about engineering and vice versa

Program Sketch Authors: Lawrence Shea

Name of the Concept: "Post-Doc"

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

 "Post-Doc" for arts MFA students working in technology and performance

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Pathway for new artists to build experiences and skills
- These new grads will support local non-profit venues with talent and developing new tech for events
  - Expand capacity for regional venues
  - Expand audience for regional venues
  - Increase adoption of new practices regionally outside of "coasts"
  - Promote using new media topics for local storytelling
  - Increase access knowledge to these new tools

Program Sketch Authors: Lawrence Shea

# Name of the Concept: Labor Library

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

Lower costs and support more grant seekers

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Seed a small group of paid and benefited people who support applied projects the same way a grant out. The contributors would build expertise in early stages of project/product innovation that can be applied across many people's ideas
- Gig workers, underemployed artists, designers, software engineers, writers, etc.

**Program Sketch Authors:** 

# Building on Today's NSF

Name of the Concept: Entrepreneurial Scouts

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Often, artists are not aware of their innovations. They are coming up with solutions to problems they face in order to tell the story. But often, actual commercialization is possible in that solution. That's the hidden potential that current models can't uncover – because the artist isn't aware, and the current model requires them to be aware
- Mismatch between goals of many artists (goal is finished cultural work) and commercialization, even though many artistic processes result in potentially commercialization components

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Create regional network of scouts who are plugged into the local arts scenes. Those regional scouts
  would have the mandate to uncover potential solutions that have commercial/societal/entrepreneurial
  potential.
- Then connect with the artist. Ask about the solution. Describe the potential, then help them with the legal foundation to protect their IP.
- Then connect them with designers to turn it into a product or UX person to help make something that scales.
- Then business mentors to help write the case.
- Then help them find next phase funding
- Remove the onus for all awareness off the artist and provide their work the recognition it deserves.
- Fund development of innovation scouts
  - Who specifically look for opportunities/IP within a creative practice
  - Could be domain-specific (ex. Textiles)
  - Support commercialization of idea that was side-effect of the creative process

Program Sketch Authors: Julian Rad, Elise Co

Name of the Concept: Smart Theatres

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- The arts needs "smart theatres" and flexible innovative spaces
- Performing arts as a place for innovation

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Convening with a multidisciplinary approach to define needs and opportunities for "smart theatre" spaces that performing artists can access to prototype and iterate new approaches
- Connecting performing arts/arts and tech communities with national funders
  - Regional convening for performance technology creators and national funders
- Regional "hubs" for research in performing arts and tech innovation with funding from NSF
- "Smart theatres" flexible theatres that can respond to new technologies

**Program Sketch Authors:** Lisa Jamhoury, Kate Stevenson, Mert Toka, Lori Melichar

# Name of the Concept: "Intellectual Merit" Education for Artists

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- "Broader Impact" is an easy thing for artists to recognize in their work
- "Intellectual merit" may not be something they recognize or know how to explain
- In come cases, they would qualify as intellectual merit for NSF

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Offer workshops for artists to understand how to identify, contextualize, and communicate intellectual merit of their work
  - Would help understand where it might fit into NSF

Program Sketch Authors: Aaron Deacon

# Building on Today's NSF

Name of the Concept:

More Education and Outreach in Facets of Creative Sector about Entrepreneurship in the NSF/TIPs Lens

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Challenge: innovation hiding in hard-to-reach places
  - Geographically, community, sector, marginalized creators operating outside of traditional channels)
  - Lots of programs centered around techreadiness/adaptiveness in creative industries which can build pipelines/feeders
  - Ex. Voice ID, there are many artists/technologists are creating things like this at a small scale
    - Recreate EYEO conference
- Opportunity:
  - Discover potential leads
  - Train/offer technical assistance
  - Ideation training
  - Pitch training sessions to develop ideas/lenses appropriate for NSF program

# **Concept for the NSF**

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Part 1
  - More education/outreach in partnership with NEA and creative sector (deeper convo/awareness around intellectual merit/broader impact)
- Part 2
  - Create a cohort of projects to receive seed funding that represent potential tech innovations with social impact promise
- Part 3
  - Recreate national conference events like EYEO Conference (art + code conference)(which doesn't exist anymore)

Program Sketch Authors: Gracie Narcho

Name of the Concept: Ethical AI Scouts

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

Making AI work for society

# **Concept for the NSF**

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

 A&R style regional scouts research artists who are working with innovative machine learning/"AI" to discover new technology with societal impact

Program Sketch Authors: Mike Young

# Name of the Concept: Social Currency

# **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

- Social currency of influence can be more valuable than money
- Education of why IP/ownership matters advocacy for new policy on this topic

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

**Program Sketch Authors:** 

# Name of the Concept: Rethinking Ownership

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Expand conceptions of ownership to unlock pathways to collective creation, value creation, wealth creation

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Leverage Indigenous farmers, guilds, ESOPs and more as organizing frameworks for individual-creators to engage in "business" or "commercial" creative activities while gaining ownership in commercial ventures
- In other words, beyond philanthropy or VC to invest in/create ownership -> wealth -> sustained livelihoods

Program Sketch Authors: Alice Loy

# Name of the Concept: Part Time Entrepreneurial Team Member for Story Telling

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Great technical ideas die when they sell a technology instead of a story on how the technology will solve multiple problems that matter

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Engage the creative sector to help build the:
  - Impact story for the technical idea and its application
  - Suggest broader impact options
  - Connect to unconventional potential markets
  - Be part of the story telling for funders/markets
  - Creatively anticipate potential barriers and workarounds
  - Multiple and different success outcomes
  - Stories that can appeal to non-technologists

Program Sketch Authors: Glenn Ricart

# Name of the Concept: Music and Tech Labs

# **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

 Music and tech labs that invest in startups, recording musicians, new models of monetization, AI, and intellectual property updates

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

Program Sketch Authors: Cezanne Charles

# Name of the Concept: Reaching Traditionally Excluded Artists

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Challenge: how do we reach artists and communities outside of academia

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Enable non-traditional science PI to apply
- Info session inviting community members/organizations traditionally excluded from NSF fundings
- Changing what "peer" means and peer-review process
- Frame art <u>as</u> research. Value a diversity of outcomes.

Program Sketch Authors: Payton Croskey, Sam Bourgault, JJM

# Building on Today's NSF

Name of the Concept: Lack of Knowledge

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Lack of knowledge/ability to translate between disciplines
- (Developing learning shared language is challenging and lengthy)

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Develop interdisciplinary pilot programs that can be added to higher education curriculum to improve student awareness/ability to serve on multi-disciplinary teams
  - For example policy briefing (short, approachable, easily deliverable content)
- IDEA: story boarding a policy brief like a comic strip
- Could include
  - Frameworks
  - Ex. Policy brief

Program Sketch Authors: Jeremy Schlegel, Carl Grodach, Megan Van Voorhis

# Building on Today's NSF

# Name of the Concept: Pilot Grant Program

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Lengthy administration of larger grants to point of need

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Create a pilot grant program with a creative on the review panel to quickly/responsibly get funding to exciting, critical research that can benefit NSF and creative goals/agendas
- \$50k easily administered program support with low barriers to entry, review, paperwork

Program Sketch Authors: Jeremy Schlegel, Carl Grodach, Megan Van Voorhis

Name of the Concept: Collaboration

# **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

- Interdisciplinary collaboration
- How to collaborate: the NSF might fund initiatives that demonstrate "how to collaborate"

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

**Program Sketch Authors:** 

Session: Society-focused Programs

**ICC National Convening** 

# Name of the Concept: Involve Creatives to Redefine "The Grant Boxes"

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Solving social problems
  - Utilizing oral histories and regional expertise to see and understand

# **Concept for the NSF**

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Integration at the start of a problem
  - Identifying what the grant boxes are

**Program Sketch Authors:** 

# Name of the Concept: Break the University Requirement

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Access to NSF funding is through an institution
  - Too insular

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Government matching funding of universities to match entrepreneurs
- Get out of the university silo
- Language of promotion
- The entrepreneur is a start, but it is still a challenge

**Program Sketch Authors:** 

# Name of the Concept: Incentive Trans. Disc. Outcomes from an Institution

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- The audience and incentives don't exist for "popular" or mass research
- (Institutional resistance)

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- Now the Dean must support
- Create grant criteria to be a "public impact"
- Require transdisciplinary outcomes from the beginning
- Remove the perception of creative collaboration

**Program Sketch Authors:** 

# Name of the Concept: Trans Disciplinary Network Opportunity

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Interdisciplinary collab between hard and soft sciences is not naturally happening

# Concept for the NSF

Describe a specific way an existing NSF program could engage with the creative sector in an impactful way, ideally at a national scale.

- "Seek intentional collaboration"
- Create more intentionality about breaking silos, getting scientists to collaborate with creatives more regularly and productively
- Bring people together for a problem (example: sources of truth)
- New ways to present + share insights

**Program Sketch Authors:** 

# New Models, Programs, and Partnerships

Participants transitioned to envision new approaches that move beyond current NSF offerings to consider the new types of R&D models, programs, and partnerships needed to address the needs and ideas explored in Day 1.

# **Overview of Speakers and Topics**

Brea	kout 1	
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Indigenous Culture and Creativity Hubs

### **Led By**

### **Jason Leigh**

Professor University of Hawaii At Manoa

### **Chris Lee**

Founder and Director Senior Director University of Hawaii Academy for Creative Media Academy of

### **Nurit Kirshenbaum**

Professor University of Hawaii At Manoa

### **Breakout 2**

New Models for the Entertainment Industry

### Led By

### **Gabriele Almon**

Sr. Director of Policy & Research Television Academy

### **Alex Forsythe**

Senior Director, Science and Technology Academy of Motion Picture Arts and Sciences

### **Chaitan Baru**

Senior Advisor, Technology, Innovation, and Partnerships National Science Foundation

### **Breakout 3**

**Ethical Creative Technology** 

### Led By

### Alexandra (Alex) Porter

Graduate Student Wayne State University

### **Breakout 4**

Community Open
Data

### Led By

## **Alice Loy**

Co-Founder and CEO Creative Startups

### **Breakout 5**

**Bridging Emergent Tech and Creative Practice** 

### **Led By**

### Rajeev Jain

Senior Director, Technology Qualcomm

### **Jax Deluca**

Director of Film/Media Arts
National Endowment for the Arts

### **Lauren Lee McCarthy**

ICC - Co-Principal Investigator UCLA Design Media Arts



# Name of the Concept: Technologies

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Technologies developed for artistic projects quickly become obsolete if the show/event stops touring
- Artists/technologists are isolated and have limited resources

# Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Funding for cross-team continued tech development
- Promote touring opportunities by supporting local venues to host technically challenging work
- Scale up from individual solutions to more broadly applicable tools

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Regional presenters
- Make-spaces
- Non-profit educational spaces/NOT universities
- Universities

Breakout/Concept Authors: Bridging Tech and Creative Practices / Lawrence Shea, CMU



# Name of the Concept: Creative Partnership Funding

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Science and engineering projects could benefit greatly from involvement by artists and designers and vise versa
- It's often hard to support these partnerships
- Academic institutions are often very siloed

# Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- A funding program that bridges science/engineering and creative fields, requiring Co-PIs from science/engineering and arts/humanities fields
  - These Co-PI partnerships would also help onboard/mentor new PIs
- A big sticky point for creative people engaging with NSF is lack of familiarity with terminology and application procedures

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

- NEA Could contribute jury members?
  - There is a need for multidisciplinary juries that can understand the impact on the project of creative elements of proposals
  - Advertise the fact that the jury is multidisciplinary to encourage participation

Breakout/Concept Authors: Bridging Tech and Creative Practices / Lauren Lee McCarthy, Lisa Jamhoury, Kate Stevenson,

Nikora Ngaropo, Amber Leon-Guerrero, Brian Frehner



# Name of the Concept: Connecting Point

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Technologists and electrical engineers working within the creative industry are rarely informed or equipped to navigate federal grants (or any type of grant) as they are typically freelancers working independently (or collectives of creative cohorts solving technical issues in the entertainment industry) and are usually not at the table or fall in between categories (and are usually a line item as technical consultants)
  - Sometimes a tech solution needed in performance might have a useful application <u>elsewhere</u>

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Connect with electrical engineers/computing majors at universities with interdisciplinary programs and informal spaces that do outreach/education efforts in the arts/tech field

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Places like:
  - NYU ITP
  - CMU / School for Creative Inquiry
  - UCLA
  - MIT
  - LIMITS (Computing within limits.org)
  - Older, nonexistent networks: EYFO Conference
  - Art++Code (at CMU)
  - Trade unions in the entertainment industry
  - Non-union skilled workers in film/performing arts

Breakout/Concept Authors: Bridging Tech and Creative Practices / Jax Deluca



# Name of the Concept: Artist Residency Earlier in the R&D Cycle

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Artists are (often) brought in to do visioning at the applied breakthrough stage – what if we bought them in at foundational breakthrough, or even ruing the hypothesis/experiment stage

## Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Grant program
- Soliciting criteria or incentives
  - NSF Sponsored "artist-inresidence" at tech companies/labs

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Bridging Tech and Creative Practices / Aaron Deacon, Rajeev Jain



# Name of the Concept: Community Driven Technology

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Public spaces: performing art centers waste: audience for traditional art dying/ How do we repurpose public space for energy art/technology (ex. XR/AI)
- "Smart Mobility" access to technology for underprivileged communities
  - Low-cost access technology
- Technology for artist in experience how to lower cost e.g. dance
- Form factor technology that "fits" form factor imagined by artist

# Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Find collaboration across engineering/technology/public projects to deliver technology that meets community needs

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

- HBC
- NEA
- Civic agents

Breakout/Concept Authors: Bridging Tech and Creative Practices / Rajeev Jain



# Name of the Concept: Models for Additional Funding

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

# Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Seed funding
  - Projects can be selected for funding beyond initial "phase zero"
  - Orgs selected receive ongoing support

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Bridging Tech and Creative Practices



# Name of the Concept: Phase Zero Funding

## The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Access is limited
- Invest before the "valley of death"

# Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Phase Zero funding through intermediary hubs that invest in community-based tech solutions that address specific issues
- Relevant tech infrastructure and develop and test
  - Proof of concept

## **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Bridging Tech and Creative Practices



# Name of the Concept: Immediate Behavioral Modification

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Police and other actors can act in unethical ways (e.g. George Floyd)
- Fully transparent with each other
- Being truthful with police and other authorities
- Everyone getting on socials
- People being kind on socials
- Not caring about body on social media
- Getting off VR
  - It makes you meet people in both ways

# **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

- Investigate/fund tech to trade ethical/moral actions of public servants
- "Cop Stop"
- Could monitor ethical behavior and use methods (brain interventions or muscle simulation) to prevent actions
- Tracking ethical things
- Getting rid of meta/Al
- Making better social medias
- Making safe spaces for everyone
- Having people feel included
- Helping to make a safe AI that gives responses to questions it should actually be getting asked
- People getting off apps all day
- Adding reminders on socials to stop scrolling every 15-20 mins

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Government (President, VP, Branches, etc.)
- Owners of the socials
- My mom (Alex Porter)
- Partners with socials
- Makers of Al
- Al itself
- VRs
- Content creators
- Keeping ethics in mind
- Teens/kids so they can help to make it better for their mental health

Breakout/Concept Authors: Ethical Creative Technology / Stefan Youngblood, Riley D., Alex Porter, Jaleel White, Wesley Taylor



# Name of the Concept: Al Driven Government?

# The Opportunity

What challenge, opportunity and inspiration are you focused on?

# Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Explore ethical transparent governance that is data driven from human subjective decision making

# **Key Partners**

Who else could be involved at the regional, state, and national levels?

Voting could be seen as a way to shape Al

Breakout/Concept Authors: Ethical Creative Technology / Jaleel White



Name of the Concept: A Non-Profit Organization or other Method to Serve as an Ethical Arbiter

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 How to create a system that is centered on ethical experience?

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Because for-profit companies tend not to check their own ethics
- Need
- "Flutics" (Flexible Ethics)
- Like B-Corp

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Ethical Creative Technology



## Name of the Concept: Ethical Engines to Oversee Other Media Platforms

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

There is a push/pull in ethical systems and profit systems

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Use tech to "police" social and/or other platforms to achieve ethical, representative user experiences

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Ethical Creative Technology / Alex Porter



## Name of the Concept: Methods to Encourage All to Vote

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Research into social methods of achieving full voting participation
- Psychology on tech

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Ethical Creative Technology / Jaleel White



# Name of the Concept: Open-Source Technology

#### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- More open-source technology in social media
- Re-incorporate/prioritize "local" involvement
- Distinguish between forms of representation and their purpose

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Creative commons
- · Community mesh networks
- Funding these types of research opportunities
- Integrated survivability

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Ethical Creative Technology



### Name of the Concept: New Roles in Media Production

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Lead the world in taking advantage of changing production
- Rescue jobs from having to be outsourced and U.S. from losing entertainment dominance
- Create new eco-system in the Midwest/other areas
- Incubate/stress test New York

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Training and development of new and experienced production roles to harness latest production trends
- My company is actively producing content with new pipelines for major studios and are challenged with finding talent that is ready
- We can also segment and merge older roles to meet current/future demands
- Opportunity for underserved groups

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Broadcasters/streamers
- Universities/Community Colleges
- Production companies
- Community workforce development organizations

Breakout/Concept Authors: Entertainment / Carl Reed



# Name of the Concept: Fundraising Beyond "The Pivot"

### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

 There is not a model for start-ups, transitioning or pivoting and who funds

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

New/shifts for SSBR approaches

### **Key Partners**

Who else could be involved at the regional, state, and national levels?



### Name of the Concept: New + Authentic Metrics

### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

 Define and create the measurements that are most authentic to your challenge

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Example: digital twins and wearables to get more visibility and data

### **Key Partners**

Who else could be involved at the regional, state, and national levels?



## Name of the Concept: New Model for Training

### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

- Experienced workers need support to get familiar with technology
- How do you prepare for the new internet vs. upskilling to antiquated tech

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- New model of training
- Leveraging expertise across a network

### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Measuring the Speed of Tech

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Measuring the new technology
  - The time and results would be outdated quickly and laborious
- How are we measuring the creative economy?
  - It is currently undervalued
  - Not NSF(NEA)

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Survey to measure the expansion, creation and adoption of new technology

### **Key Partners**

Who else could be involved at the regional, state, and national levels?



## Name of the Concept: Sharing New Work

### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

So much work is sitting on machines not being seen

### **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

- Public performance rights, how can we take that model and create opportunities to broaden the audience
- Support to build tech infrastructure to share immersive experiences more seamlessly

### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Future Digital Workplace

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

The regional infrastructure for virtual production does not exist

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- What is the digital workplace of the future?
- What are policies and structures needed to give a voice to these independent/"Solo" or regional voices

### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Creative Gig Economy Certificate

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 The economics of independent films, who is researching, surveying for workforce skill data

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- How to get a pulse on the creative gig economy
- Don't have a certificate that they've been certified in immersive tech

### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Up-skill Existing Workers

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Below the line up and re-skilling
  - Not just young people
  - Vocational technical skills
  - Meet people where they are vs. forcing into existing learning systems
- What is the new entry level if AI is the tool that replaces/economized that

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Community colleges hiring industry professionals who can upskill existing workers

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Community college system
- Excellent NSF program



### Name of the Concept: The Virtual Set of the Future

### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

Empower a single person to do the whole process, but collaboration

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Digital collaboration platform of the future
- New workflows and the skills to support it

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Community college system



# Name of the Concept: Polyphony - Decrease Polarization

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Decreasing polarization
- Arguing to understand not to win

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Polyphony around shared data
- Multiple prospects on what's important and what the data reveals
- Can artists <u>show</u> different interpretations of the data

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- New Pluralists Citizen University
- Civic collaborating

Breakout/Concept Authors: Community Open Data



## Name of the Concept: Artist Interpreted Data

### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

 Show complex data that is normally delivered in text/graph format in artistic way that leverages the data important to THAT community

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

Employ creators to visualize complex reports

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Community Open Data



# Name of the Concept: 10-Year Moonshots Around Targeted Challenges

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Tackle a challenge i.e., "childhood asthma" and NSF lead (from the get-go) a syndicate of higher ed, investors, philanthropy organized around roles
  - Pre-seed, seed, Series A so the scale trajectory is envisioned from the beginning

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Mimic how statues scale but make it centered on impact
- Frankly, the Engines are doing this to an extent, but NSF could do more "bully pulpit"

#### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- FAA
- Large scale foundations
- Local foundations
- Reputable civic / health / equity / arts orgs.

Breakout/Concept Authors: Community Open Data / Alice Loy



# Name of the Concept: Engines with Holistic Impact

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 NSF engines might consider holistic impact on individual communities and ethical interactions with that community

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

Bring together the right people/resources

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Google X
- Kauffman Foundation
- Schmidt Futures

Breakout/Concept Authors: Community Open Data / Glenn Ricart



## Name of the Concept: Community Storytelling

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 How do you replicate these kinds of labs for the storytelling that may not fall into traditional storytelling structures

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Advance funding for growing the capacity of communities to do their own storytelling
- Transferability
  - Focus on not just the pilot, but knowledge transfer

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Breakout/Concept Authors: Indigenous Culture and Creativity Hubs



# Name of the Concept: Community Place-based Hubs, Community Hub Hugs

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Building networks between universities, community organizations, artist spaces, etc.
- Where communities of learning and communities of practice can be nurtured
  - Focused on local, situated problems and being able to share across the network nationally
- Teaching tech skills through application
- Places to come in and play

### **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

 Funding "Post MFA" positions (akin to post docs) and artist residencies in university departments that are not arts departments

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Talk to Chis Johanson!

Breakout/Concept Authors: Indigenous Culture and Creativity Hubs / Chris Johanson

# Plenary Talk and Exercise

A thought-provoking talk was given from a leader at the National Science Foundation, which synthesized perspectives from the conference.

Following the talk, participants experienced an "unconference" mastermind, collaborating at small tables to develop and refine ideas related to the talk heard prior. Participants shared their insights across the room, learning actionable concepts from each other.

## **Overview of Speakers**

### Plenary Talk Given By

### **Kevin Clark**

Program Director, STEM Education National Science Foundation

# "Unconference" Exercise Facilitated by

### **Matt Phillips**

ICC Facilitator, President

### **Kevin Clark**

- When people find out I am from the NSF they give me that look like "why are you here?" because people don't know what the NSF does.
- Mission history
  - Advance the national health, prosperity, and welfare
  - Secure the national defense
  - Promote the progress of science
- NSF by the Numbers
  - 11k grants awarded per year
  - \$9.9 billion in funding from the US government
  - 39k proposals evaluated
  - \$1.6 billion STEM education
  - 1.8k NSF funded institutions
  - 93% funds research, education, and related activities
  - 352k people NSF supported
  - 258 NSF funded Nobel Prize winners

### **Kevin Clark**

- What can YOU do?
  - Proposers may send a 1-2 page concept paper to <u>DRLASL@nsf.gov</u> to schedule a 30-minute meeting or receive written feedback
  - Search for funded projects at <a href="https://www.nsf.gov/awardsearch">https://www.nsf.gov/awardsearch</a>
  - Serve as a reviewer for NSF AISL: <a href="https://new.nsf.gov/funding/opportunities/aisl-advancing-informal-stem-learning/announcements/109728">https://new.nsf.gov/funding/opportunities/aisl-advancing-informal-stem-learning/announcements/109728</a>

# Unconference: What stood out from Kevin's talk?

- "We came across a question of how to make artistic practices more scientific. We came up with an idea to document potential outcomes opposed to actual results. Give a scientific element to art. This can also happen in workshops. How can we make general art more scientific for NSF?"
- "Technology to create healthy neighborhoods."
- "Grant and funding process: an arch funding model that could be more widely adapted. This would also come along with support and resources along the way that could open up more funding. Broadly distribute the 'secret menu."
- "The original thought was how can we expand digitally managed practices to meet a defense mandate.
   What can they use to inform themselves and would be an interactive ongoing learning tool. This raised questions about how much data is enough and where is the ethical line."
- "The UK specifically did some of this work a little while ago and realized that creative enterprises are huge exports. Understanding that our exports in the future will be comprised of a lot of this."
- "Definitions need to change a little bit, break down silos, make connections. All the different areas of specialization and expertise. NSF can kickstart this."

# Program Office Greenfield

We flipped the script and imagined ourselves as NSF program officers of the future, tasked with defining and running programs to support innovation at the intersection of the creative and technology sectors.

Participants imagined the role in a variety of ways to think through approaches to meet NSF's vision of innovation anywhere, opportunity everywhere.

# **Overview of Greenfield Topics**

Greenfield 1	Greenfield 2	Greenfield 3	Greenfield 4	Greenfield 5
Regional Innovation	Entrepreneurship	<b>Economic Competitiveness</b>	<b>Distributed Communities of Practice</b>	Workforce Development
Led By	Led By	Led By	Led By	Led By
Greg Pottie ICC - Co-Principal Investigator UCLA Electrical Engineering	Jennifer Jacobs ICC - Co-Principal Investigator UCSB Media Arts & Technology Kevin Clark	Jeff Burke ICC - Principal Investigator UCLA Theater, Film and Television Allyson Kennedy	Lauren Lee McCarthy ICC - Co-Principal Investigator UCLA Design Media Arts  Jax Deluca Director of Film/Media Arts	Christopher Johanson ICC - Co-Principal Investigator UCLA Classics, Digital Humanities Chaitan Baru Senior Advisor, Technology,
	Program Director, STEM Education National Science Foundation	Program Director, Computer and Information Science and Engineering National Science Foundation	National Endowment for the Arts	Innovation, and Partnerships National Science Foundation

# Write your breakout focus and discuss.

- Breakout 1
- Take it for Grant-Ed
- Regional Innovation
- Help prepare people to write grants

### How will you bring the creative and tech sectors together?

- Ask Al
- First answer: if Al restated the question
- Al powered grant matching
- Al writing assistant
- Data Analysis from previous grants

Write bullets describing a **call for proposals** that you'd run.

- Curated performances appealing to grant writers and seekers
- Introduce opportunities
- Grant therapist

# 2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

- Aspiring non-profit founder
  - After school STEM

### **Project pitch**

- Researcher with a big idea
  - Clean energy

### **Project pitch**

Educator-turned-entrepreneur

### **Project pitch**

Community organizer

# Write your breakout focus and discuss.

- Breakout 1
- Innovation villages

### How will you bring the creative and tech sectors together?

- Planned village
- Residents expect to be a part of innovation tests

# Write bullets describing a **call for proposals** that you'd run.

- What innovation are you proposing?
- What is its value?
- Is it safe?
- Did the village vote to accept it?
- Co-living fellowships
- Establish regional identity
- Support arts

# 2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

Closed loop bio-vegan materials research

### **Project pitch**

 Collaborative music models including competition and performance – dataset with governance model

### **Project pitch**

- A plastic free village
- Better understand how to remove plastics and maintain it

### **Project pitch**

- Be a test site for NSF/CISE/SCC projects that are infeasible elsewhere
- Don't hold back the future because of the present

# Write your breakout focus and discuss.

- Breakout 1
- Local/state

### How will you bring the creative and tech sectors together?

- Convening via networks
- Distributed content creating challenges that have both tech and creative components

# Write bullets describing a **call for proposals** that you'd run.

- Education (k-12, college, informal, lifetime)
- Social impact (with technical and non-technical collaborations)
- New models of cultural expression (creation, adoption, delivery)

# 2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

 New collaboration tool to enable integrating of tech and human craft (designed to be updated regularly with distributed network)

### **Project pitch**

 D+D metaverse (or other RPG) to enable story telling in games by players

### **Project pitch**

 IP that works for distributed tech/content creation; testing of consequences for multiple scenarios

### **Project pitch**

- Games as informal ED
  - Spatial web
  - Community/public interest technology
  - Place-based digital inclusion

# Write your breakout focus and discuss.

- Breakout 1
- Articulating holistic awe program
- Communicating visually (mind and emotion) to communicate topics and new technologies

### How will you bring the creative and tech sectors together?

- Innovation/topic
- Tech
- Comm/creative
- Audience
- Equal partners

Write bullets describing a **call for proposals** that you'd run.

- Plans that integrate tech and communication operative intended to create immersive experiences, that change heart and mind
- We want places that create ah-ha moments
- Communicate complex topics in a deep emotional/experiential way

2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

 Psychological impact of nutrition on your health

### **Project pitch**

 Projections of future climate landscapes

### **Project pitch**

 Impacts of war and conquest via Nazi looting of Western art

### Project pitch

# Write your breakout focus and discuss.

- Breakout 1
- What happens if we succeed?

### How will you bring the creative and tech sectors together?

- What would be the impact of success of funded NSF projects
- (CISE/SCC)

Write bullets describing a **call for proposals** that you'd run.

- Identify and align with other funded research
- Predict broader impacts and how they should be understood/taken advantage of/avoiding downsides

# 2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

 Create digital twin accurate enough to project the ranges of results the SCC research must create

### **Project pitch**

 Take 2+ projects in S&CC and study cross-impacts

### **Project pitch**

 Realistic digital twin ready to simulate your research

### **Project pitch**

We'll create an LLM to allow S&CC projects to be emulated

# Write your breakout focus and discuss.

- Breakout 2
- Relationship building grant (growth grant)

### How will you bring the creative and tech sectors together?

- Convenings knowing passion
- Time during convening
- Safe space for vulnerability
- Intentional space by design
- Multi-disciplinary: who is in the room and conversation
- Multi-model
- Bottom up

Write bullets describing a **call for proposals** that you'd run.

- We are looking for proposals for convenings around multidisciplinary multi-model projects
- These projects should support or generate lasting relationships between creatives and researchers
- The outcomes should be nondeterminative but could result in products, tech, knowledge sharing, knowledge creation, but most importantly long-lasting relationships that have broad impact on industries, sectors or communities
- This grant is multi-staged to support recent relationships through low stakes. Introducing seed funding to more substantial expanding for more rooted projects

2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

- Determine what the applying org or sole proprietor already established and understand in their field of creative works or research
- Also understand the "income to public impact" to determine the tier in which the organization belongs in, to give those who are just starting a chance to receive a grant. Monitoring isn't necessary but it necessary for future grants

### Project pitch

### **Project pitch**

### **Project pitch**

# Write your breakout focus and discuss.

- Breakout 2
- Entrepreneurship

### How will you bring the creative and tech sectors together?

- Prerequisite of a tech and creative partnership
- Mutual benefit
- Product
  development
  component or
  leveraging
  existing
  commercial
  product or service

Write bullets describing a **call for proposals** that you'd run.

- What is the problem you are solving or opportunity you are exploring?
- Parameters
- There must be a clear sci/tech and creative partnership
- There should be a relation of mutual benefits
- Your work should be tracked and discussed in platforms to provide dialogue in the wider community
- How will measure impact what the ROI look like?
  - "The awe index"
- Grant before grant funding

# 2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

 Furthering affective computing by applying therapeutic/health technologies to assessing emotional response in film/entertainment

### **Project pitch**

Smart architecture for artistic monitoring

### **Project pitch**

 Flipping data: investigating methods for individuals to monetize their personal data at scale

### **Project pitch**



## Name of the Concept: Multiple Concepts!!!

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Challenge:
  - Sacrificing creative integrity in proposals to fit research agendas – more deductive vs. inductive
  - Reveal the "secret" menu of NSF resources
  - Expand definition of science

### **Concept for the NSF**

Describe how NSF could be involved in making it happen on a national level.

- Arch funding model more liberatory and unrestricted but with support and resources along the way
- A more accessible/public facing directory of resources
- Regional scouts that embed themselves in local cultures and take responsibility off creatives or voices that have been excluded

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Concept Sketch Authors: Breakout 2 / Alex Porter, Wes Taylor, Amber Leon-Guerrero, Mert Toka, Julian, Anika, Nikora Ngaropo



# Name of the Concept: Community Advisory Committees

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Dialogical decision making – including the communities that are impacted the most

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Community advisory committees on a regional level
- Grant before the grant providing more support before grant funding

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Indigenous populations
- People of Color
- LGBTQ+ community
- Women
- Any underserved/underserviced communities

Concept Sketch Authors: Breakout 2



# Name of the Concept: Al Bot – GPT for NSF – Simple but Impactful

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

Finding information on the NSF site can be difficult

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- GPT for NSF
  - This is a simple way for the average person to navigate the information
- It allows the person to "naturally" have a dialogue with the information and find where you fit and potentially the problems that need to be be solved from an NSF lens

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Tech partner and NSF

Concept Sketch Authors: Breakout 2 / Nikora Ngaropo, Amber Leon-Guerrero

# 1. Your team is a program office in a new agency at the local, state, or federal level.

# Write your breakout focus and discuss.

- Breakout 3
- Team applies for grant

### How will you bring the creative and tech sectors together?

### Who?

- User
- University
- Researcher
- Entrepreneur
  - Funded by SBIR

Write bullets describing a **call for proposals** that you'd run.

- They take a research topic and deliver it to production for a use case validated by one or more customers who commit to testing and deploying
- Industry non-profit org could help NSF review or be delegated approval or management
- Co-funding with the customer?

# 2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

- An entrepreneur-researcher received an SBIR grant, built a product, found a customer who needs something with different features
- Wants funding to pivot the project

### **Project pitch**

### **Project pitch**

- An entrepreneur found a research project they want to commercialize, it has a customer
- · Seeks a grant to fund it

### Project pitch

# **Program Office Greenfield**

# 1. Your team is a program office in a new agency at the local, state, or federal level.

# Write your breakout focus and discuss.

- Breakout 3
- Center for creative intersections

### How will you bring the creative and tech sectors together?

 Intersection of academic research on gen Al and large institutions to use OR entrepreneurs Write bullets describing a **call for proposals** that you'd run.

- Applications are refocused and unique to specific communities
- The goal is to put things that are unique and special about communities to create competitive advantage no one else has
- We need input from movie makers today (lessons learned) so we can focus on longer term research and learning to feed that into production of the future
- Must include one partnership that is distinctively different from your business

2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

- How do we make technology more efficient then integrated into today's production?
- "Productize" research in a way that makes it into industry and is helpful to industry

### **Project pitch**

### **Project pitch**

 Their funding from the center goes to fund smaller teams

### **Project pitch**

# **Program Office Greenfield**



# Name of the Concept: Current Program (CISE): Civic Innovation Challenge

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Using tech to solve civic problems
- Ex. Increasing graduation rate in community colleges of Black and Brown people
  - Called Techoguide (tech being developed in Sacramento)
  - Tech solution takes their varied experiences and puts together to recommend the degree programs and remaining needs to graduate
    - Shows the pathway to graduation

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Add the creative industry to this existing program

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Local cities/communities
- Tech builder
- Community outreach or builder
- State treasurer's office
  - Funding source?

# 1. Your team is a program office in a new agency at the local, state, or federal level.

# Write your breakout focus and discuss.

- Breakout 4
- Disability and accessibility
- Access workers

### How will you bring the creative and tech sectors together?

- Disability communities tend to be very distributed
- Communities are distributed across geographic areas (technology is useful for this)
- Virtual vs. in person tensions

Write bullets describing a **call for proposals** that you'd run.

- Research trust building mechanisms with specific to distributed/disabled experience
- Depth is currently sacrificed to scale. Research how depth is measured in scientific domains and how similar mechanisms could be applied to all findings

# 2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

 Diversify what is metric-ed and what growth is expected inside NSF

### **Project pitch**

 Experiment with the application framework itself

### **Project pitch**

- Polarization is a national security risk
- Research trust building techniques in multisided social markets
- Collate established design-forone access approaches as a library of reusable access tools

### **Project pitch**

- Each design application process and metrics give them:
  - Blind
  - Dine
  - Lakotta
  - Black Detroit
  - Spanish Speaking LA

# **Program Office Greenfield**

# 1. Your team is a program office in a new agency at the local, state, or federal level.

# Write your breakout focus and discuss.

- Breakout 4
- Artists and artistic knowledge

### How will you bring the creative and tech sectors together?

 Pay artists to apply to NSF to test an idea Write bullets describing a **call for proposals** that you'd run.

- Open a research opportunity for artists and graduate students to conduct research on about audiences attending perspective arts events
- In-body experiences we respond to them in our bodies
- Ascend the mental health of collaborative bodies, theatre crews, etc.
- Pre and post surveys of emotional response

# 2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

- Distributed research project study on the impact of arts programming on attendees
  - Qualitative and quantitative

### **Project pitch**

note

### **Project pitch**

- Create a pathway for artists to propose an idea
- Fund the experiential ideation of artists to advance the goals of NSF
- Create scalable opportunities for unabashed creative exploration

### **Project pitch**

note

# **Program Office Greenfield**



# Name of the Concept: Develop a USA Creative Cluster Fund

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Develop regional intermediaries that house/cultivate
 "innovation/creativity/culture" hubs that incorporate CISE, ENG, SBE, EDU, etc. elements for the benefit of local communities and advanced innovation ecosystems

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Regional support for R+D labs developing technology informed by the creative sector
- Open call to identify regional orgs that have capacity to act as an intermediary to "on-the-ground" entities

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- UIC Creative Cluster
  - Have them advise and model program similar



# Name of the Concept: Experimental Cohort Model

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

Connect the creative sector and community sector with science and technology

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Create open calls targeted to both creators/communities and scientists/engineers, which could be matched or part of a cohort oriented toward experiential/foundational research (which includes arts practices)

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

 Museums, libraries, community centers, artist centers, maker spaces, people that already do great work!!

Concept Sketch Authors: Breakout 4 / Sam Bourgault



# Name of the Concept: TIP Creative-Technology Tools & Workflows Grant

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- There is a large community of technical people building tools to support creative workflows and outputs
- · Many of these tools are used once
- They could be spun off into reports, tools, workflows that spur innovation in the arts

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- NSF could fund the building of tools/platforms OR innovative works that will likely result in new workflows/platforms/tools
  - (Creative projects that don't currently have a tech solution, but could with investment)

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Creative-technologists
- Artists working with computation/technology
- Arts and tech hubs

Concept Sketch Authors: Breakout 4 / Lisa Jamhoury



# Name of the Concept: NSF Grant Reporting Intermediary/Coach

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Independent partitioners could be more able to access funding for innovations without the burden of grant reporting

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Provide NSF guides who create reports alongside independent creators
- This will lower admin burden on small organizations and help independent creators learn the language to successfully get more grants/quantify their work

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Concept Sketch Authors: Breakout 4 / Lisa Jamhoury



# Name of the Concept: Regional Speed Dating for NSF

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 People and organizations within regional innovation ecosystems do not have awareness and potential interdisciplinary partnerships to apply for NSF programs

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- NSF can host paid two-day long speed dating and matchmaking
- Connect across interdisciplinary ecosystems within a region with a group of people that are not always aware of one another
- Day 1: matchmaking and speed dating
- Day 2: proposal development and feedback/direction for NSF

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Local labs
- Local businesses
- State entities
- National agent



# Name of the Concept: "B Corp" Process for NSF

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Help applicants through the process with tech and personnel that keep track of all parts of the process and its progress

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Create a site/app that breaks down the application process in a simple to follow way

### **Key Partners**

Who else could be involved at the regional, state, and national levels?



Name of the Concept: LESS HOOPS

### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

Free labor that is asked from artists just to apply

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Recognize that artists need the same financial support to get their final product as scientists
- More funding, less hoops

### **Key Partners**

Who else could be involved at the regional, state, and national levels?



# Name of the Concept: Highlighting Human Consciousness

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Ways of measuring cognitive/health/consciousness impacts of creative activities
- Especially in contrast to capabilities of AI, to help us identify and leverage what humans are <u>uniquely</u> capable of

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Fund creative projects whose aim is to impact on a consciousness level, AND include experts who can help develop methods for measuring

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Mental health experts
- Artists
- Philosophers
- Mindfulness industry
- Mindfulness practitioners
- Psychologists
- Behavioral scientists
- (Potentially AI experts as a counterpoint)

Concept Sketch Authors: Breakout 4 / Elise Co



# Name of the Concept: Framework for Experimentation Across Science and Art

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Identify and NAME (so we can help others identify for themselves) "scientific" processes and qualities (e.g., quantitative, data-driven or data-producing) within creative fields and practices

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Commission research that brings scientists and artists/designers together to draw explicit parallels between their processes, and name them
- This develops a framework for thinking about creative process AS scientific process (and vise versa)
- Example: what is explicit framework to identify EXPERIMENTATION

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Art + Center College of Design + Caltech
- Or other combination of creative and scientific institution

Concept Sketch Authors: Breakout 4 / Elise Co



# Name of the Concept: Funding Exploration

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

Scalable opportunities for unabashed creative exploration

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Provide funding for artists as small businesses to explore and experiment on the creative process in community

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- State arts agencies
- CDFI's
- Art and tech NGO's
- Local government
- S.B.A.'s
- Higher education



# Name of the Concept: Artists Addressing Climate Change

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 That artistic practice in adverting climate change is making its impacts visible

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Take BIG picture questions such as climate and seek answers

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Arts Institutions
- Universities
- Key artists and groups



# Name of the Concept: Amend SBIR Programs to Include Arts

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 SBIR process allows quick access to funds with excellent results and less red tape

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Lobby to add a creative component to SBIR designation
- Makes SBIR SA(arts)BIR
- Create arts category on sbir.gov

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Congress
- NSF
- NIH
- NEA

Concept Sketch Authors: Breakout 4 / Jeremy Schlegel



Name of the Concept:

Research Call: "Open Social Protocols that Build Trust" Trust Building Mechanisms (New Social Protocols)

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- Development of accessibility technology
- Disability community tend to be very distributed, technology can help
- Bring disability justice values to NSF and America as a whole

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Research trust-building mechanisms: open social protocols to build trust around shared disability or affinity.
   Social media fails here. Mechanisms for mutual support and network creation
- Accept other forms of proposals (video, audio, etc.) to broaden accessibility
- Look at established "design for one access approaches as a library of reusable tools

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Nothing about us without us
- It's essential to have disabled people involved in the process (as PIs, as NSF jury, and support staff)



# Name of the Concept: Experiment with More Accessible Application Process for NSF

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Application process prioritizes different needs and communication styles. This would open up new innovation, creativity, and opportunity for social impact

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Research how different communities design application processes
- See "Research as Ceremony"
- Could you submit via video or audio for different components?
- Or more expanded ideas?
- New metrics for evaluation
- Think about time required, and slower timelines
- Includes members of disability justice community – review applications
  - Compensate them, please, if not already

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Disabled communities
- Indigenous communities

# 1. Your team is a program office in a new agency at the local, state, or federal level.

# Write your breakout focus and discuss.

- Breakout 5
- Intergenerational skillsharing and development (local)
- Workforce ISD

### How will you bring the creative and tech sectors together?

- Trading hard and soft skills
- Reaching more analog practices as well as new technologies to create well rounded talent
- Tap into public library to house resources

# Write bullets describing a **call for proposals** that you'd run.

- Looking for informal and nontraditional teacher teachers to apply/showcase how experience has been their "universities"
- (We would then partner them with commercial)
- Community hubs/anchors colleges – industry professionals
- Freelancers teachers students

# 2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

- Experiential workshops
- Ex: Class has a common goal.
   We are lighting for portraits. In the process you learn how to use lighting tools associated with the project.
- Community re-grants seed grants
- Optional cost of admission "suggested donation"

### **Project pitch**

- 48hr pitch competition
- Everything you need to execute the project or product in house
  - Sketch (CAD)
  - 3D Printing
  - Design
  - \*Prototype\*

### **Project pitch**

- How to tell a story
- Outlining compelling stories
- Translating those through theatre
- Lighting, costumes, scenic design

### **Project pitch**

 More federal dollars to public schools!

# **Program Office Greenfield**

# 1. Your team is a program office in a new agency at the local, state, or federal level.

# Write your breakout focus and discuss.

- Breakout 5
- SFRA
- Science Fiction Reality Agency

### How will you bring the creative and tech sectors together?

- Artistic research as translational research
- JPL Example sci-fi ideas into reality (good, bad, and ugly)
- Public/private partnerships
- POI for public
- Public interest is a requirement for grantees
- Sci-fi camps!

Write bullets describing a **call for proposals** that you'd run.

- Baseline stories, artworks, films, et al. that folks "jump off" from
- Develop stories/artworks as public communication
- Develop the technologies associated with optimistic/non-dystopian futures
- Social science research associated with the above (i.e., unintended consequences)
- Futures education at primate and secondary level

2. Take turns pitching projects to the program you just designed. Optional: Make funding decisions.

### **Project pitch**

On next slide

Project pitch

### **Project pitch**

**Project pitch** 

# **Program Office Greenfield**



# Name of the Concept: Science Fiction Reality Agency (SFRA)

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 New agency that brings creative and tech together through funding sci-fi oriented projects, from a public interest technology perspective, with a public/private cooperation basis

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- National agency/effort that funds books, movies, etc.
- Funds camps, internships, and other activities
- Funds making ideas from books, movies, etc. a reality
- Focus on new things but also preventing but things/outcomes

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Hollywood
- Book publishers
- Video game industry
- DoD
- Universities
- Companies' Labs (R+D)

Concept Sketch Authors: Breakout 5 / Jesse Damiani, TJ Jackson, Chaitan Baru, Meka Egwuekwe



# Name of the Concept: Grant LLM

### **The Opportunity**

What challenge, opportunity and inspiration are you focused on?

 People don't know where to apply within large orgs like NSF

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Create an application at the highest level for grant submissions, where Al/LLM can sense and make recommendations of who, and where/what to apply to/contact

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

# Additional Program Ideas

Throughout the conference, participants shared additional program idea sketches that were inspired by conversation and connections beyond the curated content sessions.



# Name of the Concept: Reframe "Creativity" from the Start (Early School+)

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

- The word "creative" is so polarizing that many believe it is only for the arts – But "creativity" is just problem-solving
- Let's TEACH this in schools, or at least have some compelling content for children that does
  - Think modern "Schoolhouse Rock"
  - We need this to teach all kinds of things that are missing from traditional curriculum

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Recognize and validate the broader idea of what qualifies as creative both internally and externally

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

PBS kids

Concept Sketch Authors: Sarah Kennedy



# Name of the Concept: Subsidize Fiber in Underserved Communities

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

Internet access in underserved areas

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Subsidize or incentivize fiber (Google?) in cities/neighborhoods to provide fast reliable internet to areas that are generally overlooked
- Subsidize so users can use for low to no cost \$\$

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Google?
- Municipalities

Concept Sketch Authors: Sarah Kennedy



# Name of the Concept: Potential Research Topics for NSF Calls

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 Drawing from exemplars of local creative economies, create conceptual models that explain their effectiveness at leveraging local resources. Find common features of these models across the country and identify factors of creative infrastructure that are dependent on particular localities. Finally, identify potential configurations of a national ecosystem for the creative economy. Identify the feeder pathways into creative economy careers.

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Clarify (and potentially promote) models of co-production among creative technologists using different types of technologies (e.g., immersive, AI, interactive) and aiming towards different kinds of goals (e.g., education, career promotion, diverse audience engagement).
- Examine strategies for distributing immersive works (e.g., modular immersive productions).

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Identify where (and how) creative arts exist within STEM

Concept Sketch Authors: Chris Wegemer



# Name of the Concept: Ideas for NSF Funding Infrastructure

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- Small grant program for creative projects that (1) apply new technologies to produce creative outputs, (2) design novel creative tools using emerging technologies (e.g., to solve problems in the creative industry or innovate new approaches that support the creative process).
- Provide a streamlined pipeline of grants from seed funding to large grants aimed at integrating technologists and creatives.
- Provide localized grant opportunities tailored to the needs and infrastructure of each geographic region.
- Organize more national meetings and workshop programs like ICC. Creative infrastructure for innovation and relevant collaborations at the national level need to be intentionally maintained.

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Include a public networking component in all large TIP grants (e.g., conferences, events, or trainings all open to the public).
- Incentivize big players in the tech and creative industries to come to the table to shape public innovation pipelines.

Concept Sketch Authors: Chris Wegemer



# Name of the Concept: Workforce Development and Upskilling Roundtables

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 We'd be interested in discussing workforce development and large-scale technology upskilling initiatives as a roundtable partner. Because of our reach, we can assist in bringing HR and tech leaders at major companies, studios, and streamers to the table. This could help bridge gaps between the current academic curriculum, the needs of working professionals, and emerging technologies.

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Any program we roll out will impact tens of thousands of industry professionals at a time.

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

- Television Academy
- At the TV Academy, we have insight into the direction of tech development in our industry and what innovations are necessary to drive progress. Furthermore, we can identify opportunities to apply research to foster continued growth and economic competitiveness in our field.



## Name of the Concept: Studies on Workforce Trends

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 We believe that studies examining how technological advancements are changing the entertainment industry's workforce could benefit the NSF and many industry stakeholders. Again, we can bring HR and tech leaders at major companies to the table, where they could hear from NSF what tech advances are on the way and advise NSF on how they would hire based on that feedback.

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

 Create a valuable feedback loop on current hiring trends and future workforce needs based on emerging tech advancements.

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Television Academy



# Name of the Concept: Co-location Opportunity

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

We'd be open to having an NSF staff
member co-locate with us at our office or
use our office for meeting space when they
are in town. Our location is central to major
studios, and we have access to
professionals at all levels, from executives
to entry-level workers, all of whom can
serve as a sounding board for proposed
policies, projects, and programs.

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Television Academy



# Name of the Concept: Sourcing Interviewees for Research Projects

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 We can work with NSF to identify research initiatives that would benefit from direct engagement with creative and entertainment professionals and help researchers contact potential interviewees.

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Television Academy



Name of the Concept:

### Support Mini-Exchanges Between NSF Staff, Entertainment Leaders and Premiere Researchers

### The Opportunity

What challenge, opportunity and inspiration are you focused on?

 We believe that greater exposure to one another will exponentially benefit all parties.

### Concept for the NSF

Describe how NSF could be involved in making it happen on a national level.

- a) Bridging research and industry applications: We want to assist the NSF and its grantees to showcase emerging research to entertainment companies, and for those companies (specifically their technology units) to provide feedback on what they can adopt.
- b) Increasing creative capacity to enhance scientific discovery. Through curated exposure to creative workflows and training in creative problem-solving methods, we believe that enhancing the ideation skills of researchers and scientists can significantly boost scientific discovery across the country, unlocking new paradigms of innovation in the sciences. We are prepared to help the NSF design a program to facilitate this.
- c) Improving storytelling capacity of NSF staff and researchers. By allowing researchers to spend short periods at creative companies, they can learn the principles of emotion-driven storytelling. This skill can help them secure more contracts, increase their visibility, and effectively communicate the impact of their work.

### **Key Partners**

Who else could be involved at the regional, state, and national levels?

Television Academy

# Small Group Presentations, Concluding Thoughts, and Next Steps

The National Convening was wrapped up with concluding thoughts and discussion of next steps from ICC PIs.

# **Speakers**

### **Jeff Burke**

ICC – Principal Investigator UCLA Theater, Film, and Television

### **Jennifer Jacobs**

ICC – Co-Principal Investigator UCSB Media Arts & Technology

# **ICC National Convening: Final Thoughts**

- Jennifer Jacobs on next steps:
  - From the ICC project perspective, it is a 1-year project, and this is the culmination of it.
  - ICC is developing a report
    - Working on this for the next several months.
    - Taking the ideas coming from this and seeing what kinds of projects we can run with.
    - Call to the group: take advantage of these ideas and connections. Write a one-page concept outline and submit it. Identify partnerships that will allow you to do more than you would have before.
    - Even if it seems risky, propose it. If you get rejected, try again.
    - The ICC cannot do this alone.

# **ICC National Convening: Final Thoughts**

- Jeff Burke:
  - NSF is interesting in that they take risks.
  - Take risks and at the same time there is an opportunity to do research together.
  - The NSF is looking to solve challenges. What problem are you solving? What is your process of making work?

# Thank you.

Matt Phillips
matt@phillips-co.com

Amy Meginnes amy@phillips-co.com

Jessica Glennon jessica@phillips-co.com

Justin Daab justin@phillips-co.com Sarah Kennedy sarah@phillips-co.com

Madie Allender madie@phillips-co.com

