

# ***BURNING MAN 2024***

## **COOL & CURIOUS INNOVATION SPRINT**

### FINAL REPORT

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***In 2024 Burning Man became “Learning” Man, as Burners were educated about climate change, extreme heat and the urgency to get off fossil fuels.***

***The community learned about ways to stay cool sustainably and Burner energy was channeled into problem solving.***





# INTRODUCTION

- On November 15, 2023 at a NYC fundraiser Sarah ("Serendipity") DaVanzo was introduced to Burning Man executives Marian Goodell and George Reed, who had noticed Sarah's *Rolling Stone* article, *Finding the Future at Burning Man* (Oct 27, 2023) about the innovation culture of the festival.
- At the fundraiser, Burning Man's leaders announced the formation of a Regeneration team focused on getting Burning Man off fossil fuels, achieving sustainability goals (e.g., carbon-negative by 2030) and transforming the event into an innovation engine.
- Sarah, an inventor who specializes in curiosity science, futurism and experienced in leading innovation sprints offered to support Burning Man with her skills.
- Over six months (January-August 2024), Sarah collaborated with George Reed and his Regeneration team (Liza Welsh, Stephen Chun) to build a program of co-creation activities to invent sustainable cooling practices to enlist the Burning Man community in problem solving.
- The Burning Man leaders introduced Sarah to David Shearer of Black Rock Labs, which became the hosting venue for many of the Cool & Curious Innovation Sprint activities. (Many thanks to the Black Rock Lab's for its participation and support.)
- Sarah funded, planned, promoted and executed the Cool & Curious Innovation Sprint assisted by her husband, Michael ("Infostack") Elling.
- This is the report to share the innovation outcomes from the Cool & Curious Innovation Sprint program and recommended next steps.









***WHAT  
HAPPENED?***





## ***BACKGROUND***

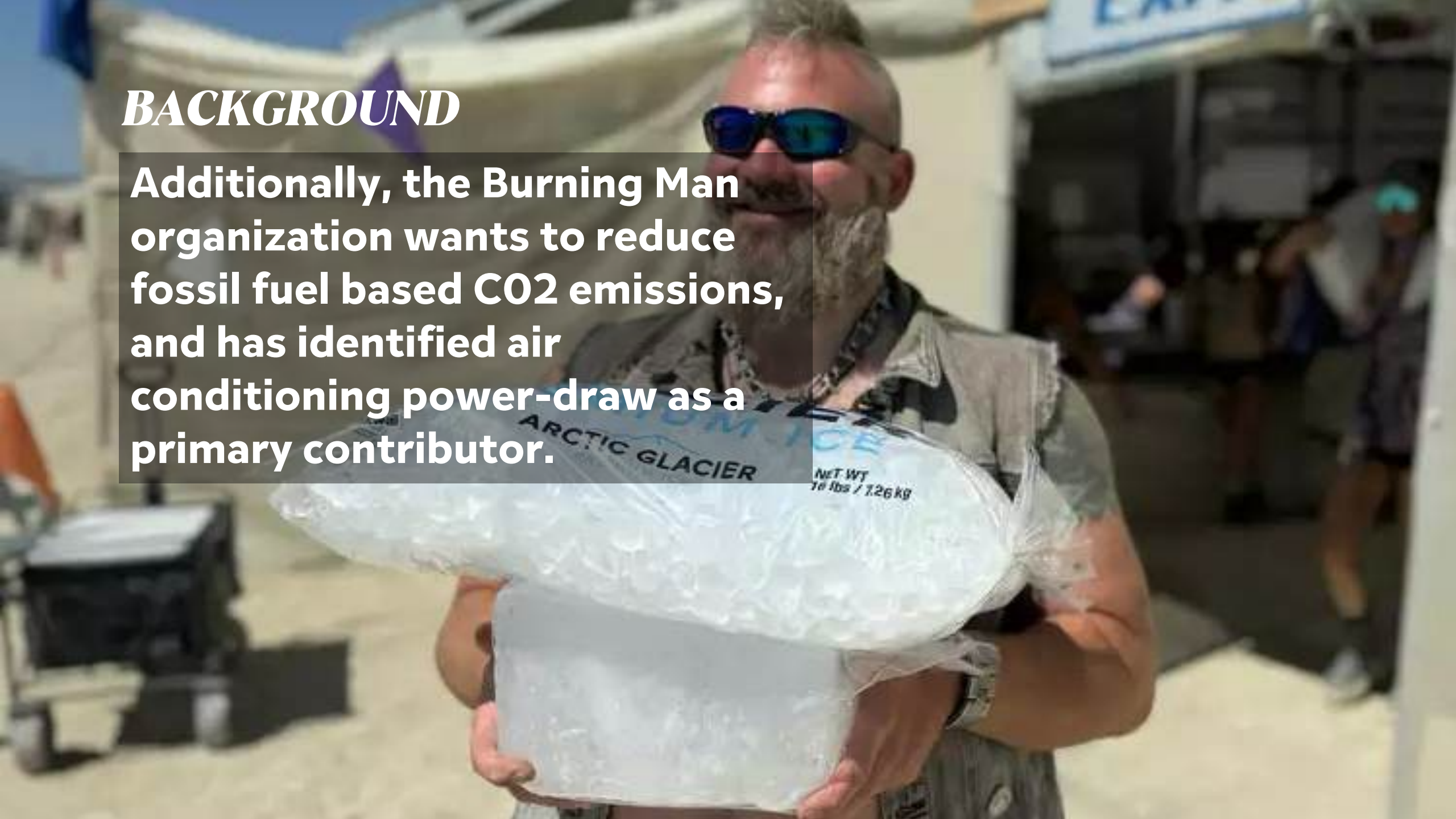
**With global warming, mitigating extreme heat is a wicked existential problem needing solutions.**





## ***BACKGROUND***

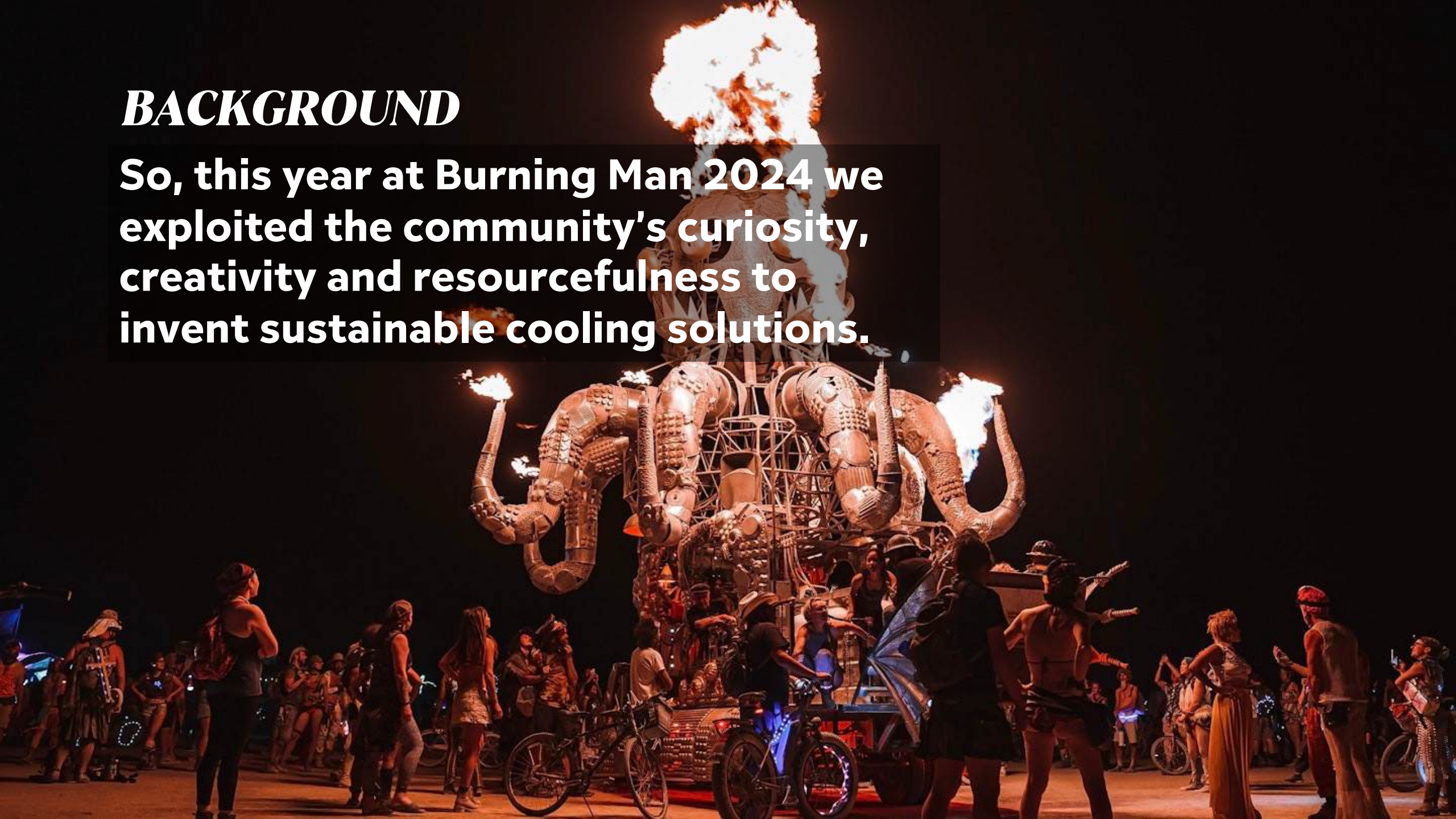
**Additionally, the Burning Man organization wants to reduce fossil fuel based CO2 emissions, and has identified air conditioning power-draw as a primary contributor.**





## ***BACKGROUND***

**So, this year at Burning Man 2024 we exploited the community's curiosity, creativity and resourcefulness to invent sustainable cooling solutions.**





## ***BACKGROUND***

**We had a hunch that the people, vibe and conditions of Burning Man are perfect for innovation and collective problem solving. We were right!**





## ***BACKGROUND***

**And, with the theme “Curiouser & Curiouser” we used curiosity science to amplify invention—*and the results are remarkable!***





## ***PROBLEM***

**Power-draw related to air conditioning is the #1 contributor to fossil fuel-based CO2 emissions at Burning Man, so inventing new sustainable cooling solutions is a priority of the Burning Man organization's Regeneration team.**

## ***CHALLENGE***

**Invent more sustainable and more power-efficient solutions to dramatically reduce cooling power usage and fossil fuel-based CO2 emissions in curious new ways to cool spaces and people—*including physical, mental and perceptual cooling concepts.***



# METHODOLOGY

## PLANNING

May-June 2024



### INDIGENOUS INSPIRATION

Discussions with Professor and author On Barak in Tel Aviv, about ancient Middle Eastern techniques to stay cool.

July-Aug 2024



### FUTURIST SURVEY

A 10-question survey of 52 international futurists about the "future of cooling."

July 2024



### BIOMIMICRY INSPIRATION

Analysis of inventions inspired by nature's cooling systems and biological cooling mechanisms.

## EXECUTION

Aug 2024



### POLAROIDS TURNED INTO "PROPERTIES"

Polaroids of ideas (invention concepts) were fixed to the 50ft hacked monopoly game.

Aug 2024



### POLAROIDS OF WHITEBOARD INVENTIONS

Doodled inventions were photographed with a Polaroid camera.

Aug 2024



### CURIOUS INVENTING WORKSHOPS

Inventing activities were driven by curiosity frameworks (e.g., teams doodled on personal whiteboards and built pipe cleaner prototypes).

Aug 2024



### COOLOPOLY GAME

A giant customized gameboard (50ft) stimulated discussions, ideation and voting on cooling concepts.

Aug 2024



### FUTURES FRIDAY TALK

Early insights and preliminary inventions were shared on center stage in Center Camp.

Aug 2024



### CURIOSITY SCIENCE PLAYSHOP

50 Burners participated in a workshop experience that stretched curiosity muscles and fostered self-awareness about curiosity.

Jan 2025

### SHARING INVENTIONS TO THE BURNING MAN COMMUNITY

Zoom meeting to discuss outcomes and align on next steps.

Sept-Nov 2024

### INVENTIONS ORGANIZED & AUGMENTED WITH AI

Report with findings and insights created for sharing.

## ANALYSIS





***WE STRETCHED  
OUR CURIOSITY  
MUSCLES***







# ***WE PLAYED HARD ON THE PLAYA***











*AND WE  
BUILT  
STUFF*



# 4 THINGS HAPPENED THIS YEAR

1

## COOL & CURIOUS INNOVATION SPRINT

A wonder-full hands-on playshop to solve an existential problem and invent sustainable cooling solutions with "curiosity science."

TUES, AUG. 27, 2024  
@ 12-2pm  
BLACK ROCK LABS (2:15/F)



2

## COOL & CURIOUS MONPOLY GAME 2040

Play a massive, customized Monopoly game to solve an existential problem—invent sustainable cooling solutions together.

FRI, AUG. 30, 2024  
@ 1-3pm  
CENTER CAMP



3

## CURIOSITY PLAYSHOP

Stretch your curiosity muscles with a Curiosity Scientist & Futurist to open your mind to possibilities and inspire invention.

FRI, AUG. 30, 2024  
4-5:00pm  
MEET @ CENTER CAMP



4

## FUTURISTS SURVEY: THE FUTURE OF COOL

Insights & ideas from a survey of 55 futurists about the future of sustainable cooling.

FRI, AUG. 30, 2024  
3-3:30pm  
MAIN STAGE @ CENTER  
CAMP





# GAMES WERE PLAYED LEADING TO INVENTION





**We ran a 50ft handmade hacked monopoly game in Center Camp designed to spark invention and collaborative problem solving thru gaming ways to cool sans CO2.**



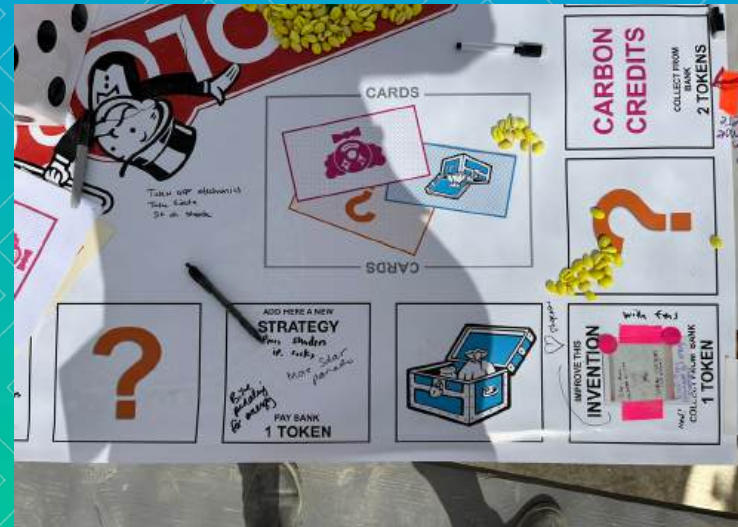




**Strangers bonded over passionate conversations about the climate. Kids played with adults as silly ideas morphed into serious inventions. Passersby doodled profound improvements to inventions.**



# COOLOPOLY UP CLOSE





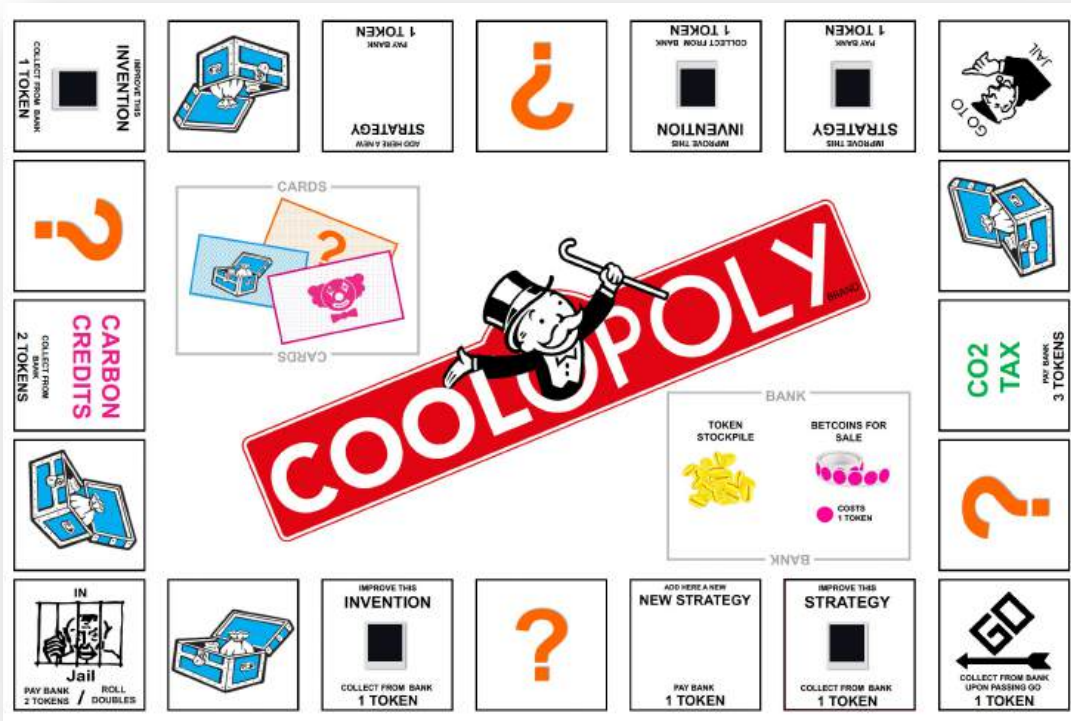
# COOLOPOLY UP CLOSE





# COOLOPOLY GAME DESIGN

## 1 Customized Gameboard: Properties are Cooling Inventions



## 2 Customized Cards



BUY 1 BETCOIN AND GIVE IT TO A DESERVING PLAYER NEARBY TO "INVEST" IN A COOLING SOLUTION.



ASK THE PERSON ON YOUR RIGHT TO INVENT A COOLING SOLUTION INSPIRED BY NATURE, e.g., succulent leaves are waxy to maintain moisture, animals pant to increase respiration, and termite mounds stay cool with built-in ventilation tunnels.

Have the person explain their idea to your group of players. (1-2 minutes)  
WRITE DOWN THE INVENTED COOLING SOLUTION (clearly so other players can understand it and read to it later on) somewhere near the gameboard.  
COLLECT 1 TOKEN from BANK.

### EXAMPLES



#### READ THIS ALOUD TO YOUR TEAMMATES FOR DISCUSSION INSPIRATION:

"Cooling strategies can be found in ancient wisdom. Dwellings and roofs made of adobe brick, stone, rammed earth and mudbrick absorb heat during the day and release it at night, while thatch and bamboo create cooling ventilation."

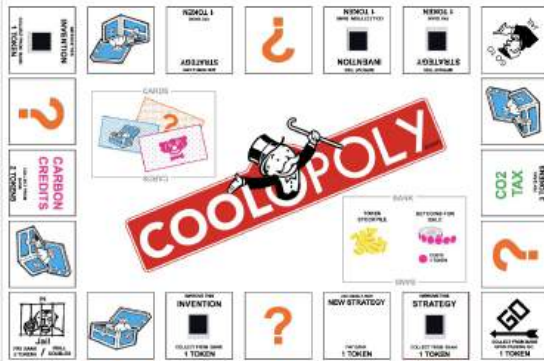
Host a brief discussion with your teammates that generates at least one action that you promise to take to the default world to help reduce cooling CO2 emissions.

Write down at least one action (clearly/legibly) somewhere near the gameboard.



# COOLOPOLY GAME PLAY

## I Customized Rules (for Asynchronous Continuous Playing 100 People)



### COOLOPOLY FAST FACTS

- COOLOPOLY is designed to support Burning Man's mission to develop sustainable cooling solutions that reduce CO2 emissions.
- Multiplayer Monopoly-like game played on a 50-ft table.
- Gameplay will last 3 hours (12pm-3pm), participants can come and go. Whoever has the most TOKENS at 3pm wins.
- Participants will generate ideas, engage in discussion, and enlist others in problem-solving, prioritizing, and optimizing the best cooling solutions.
- Guaranteed to help you solve real-world problems while accidentally having fun.

### PURPOSE

The purpose of COOLOPOLY is to invent sustainable ways to keep people and spaces cool in extreme heat. Betting/buying prioritizes the best ideas, and collaboration (and fun) are encouraged as we build on each other's ideas. Jot down your ideas and suggestions.

The INVENTIONS & STRATEGIES were created by the Burning Man community over the past week and captured by the Polaroids attached to the gameboard. Some tiles have been left blank intentionally to be filled in by new inventions and strategies developed by you during gameplay. Players "vote" on the best cooling ideas using BETCOIN purchased during gameplay.

### GAMEPLAY

- Players roll the dice and move their playing pieces from tile to tile starting from GO.
- Players START with 10 TOKENS and then win/lose TOKENS while playing.
- During the gameplay, you will:
  - IMPROVE the cooling INVENTIONS & STRATEGIES (write comments, ideas and builds directly on the gameboard around tiles).
  - CREATE & ADD new cooling INVENTIONS & STRATEGIES (write comments, ideas and builds directly on the gameboard around tiles).
  - BET on the strongest cooling INVENTIONS & STRATEGIES (with pink "BETCOIN" stickers) – which will later help us identify the strongest ideas.

### HOW TO WIN

Collect the MOST TOKENS by:

- **BEING ENGAGED.** The more engaged you are the more you stand to gain. Fellow players will be prompted to give money to the most engaged players.
- **PLAYING LONGER.** The longer you play the more you stand to gain.
- **BUYING BETCOIN** and "investing it" in ideas on the board. The more you invest in ideas, the more revenue you will receive when others land on those spaces on the board. (Make sure you write your name on all your BETCOIN!)

### HOW TO LOSE

- Run out of TOKENS. Once you've depleted all your tokens then you need to start over again on a different gameboard.
- Get kicked out because you're being a jerk.

### QUESTIONS?

If you need help, go find "MRS. PENNYBAGS" who is dressed like a circus master.



### STARTING A GAME

- Enter or leave a game at any time.
- All players (max. 10 players per crude circle of tiles) start on a GO tile.
- In order, each player takes a turn rolling the dice and moving a green PLAYING PIECE CLOCKWISE around the board taking instructions from the tiles or cards.
- TOKENS are paid to the BANK, for example:
  - PAY BANK 1 TOKEN = you add 1 TOKEN to the BANK stockpile.
  - COLLECT FROM BANK 1 TOKEN = you take 1 TOKEN from the BANK stockpile.
- Players may continue to circle the gameboard or move along a path of tiles to an adjacent gameboard to join a new game, meet new players and invent new cooling solutions.


### ENTERING A GAME ALREADY UNDER WAY

- New players may enter a game at any gameboard at any time – always on a GO TILE.
- New players are to follow the last player in a game group (i.e., the newest player throws the dice last).


### RULES

- **SETUP:** Each player chooses a green playing piece and gets some "money" (10 TOKENS). All players start with 10 TOKENS.
- **START AT GO:** Everyone starts or enters a new game, on any gameboard, at "GO."
- **ROLLING DICE:** On your turn, roll a pair of dice and move your piece that many spaces.
- **TRAVELING AROUND THE GAMEBOARD:** Travel clockwise around the board or move off along a path of tiles until you join another game.
- **LANDING ON TILES:** When you land on a tile, follow the instructions on the tile or pick a card with instructions.
- **PAY THE BANK:** If there are NO BETCOIN stickers on the tile, pay into the BANK STOCKPILE. Otherwise, pay the BETCOIN owners – you must call out their name and find them to pay them, if they don't materialize pay the BANK.
- **COLLECT FROM THE BANK:** If there are NO BETCOIN stickers on the tile, then keep the TOKEN. If there is a BETCOIN sticker on the tile, you must give your bank collection to a BETCOIN owner, if they don't materialize keep it.
- **CHANCE & INVEST CARDS:** If you land on these tiles, flip to a new card and follow the instructions on the card. Some WILD CARDS will be in the mix for fun.
- **BLANK TILES:** If you land on a blank tile, create a new cooling concept on the spot (have a little brainstorm with your fellow players), write your idea clearly on the gameboard before paying or collecting TOKENS.
- **JAIL:** If you land on "Go to Jail," move your token to the Jail space. You can get out by rolling doubles or paying the fine (2 TOKENS).
- **PASSING GO.** Every time you pass "GO," collect 1 TOKEN.
- **BETS:** On your turn, at any time, you may buy a pink BETCOIN sticker from the bank, write your name on it (clearly), and place it on the gameboard tile with the cooling





***Maybe the Burning Man community is exceptionally creative...or curiosity muscles are firing on overdrive on playa...or Burners are are primed for innovation...but whatever is going on, inventing 35 cool solutions in 60 minutes is remarkable!***





***WHAT WAS  
INVENTED?***





# 35 INVENTIONS & COOLING SOLUTIONS

HEAT COACHING

COOL ROOF RULE

BIKE-THRU CUCUMBER MIST

DRY ICE CO2 CATCHER

BRC MAP FAN

MENTAL COOLING CAMP

SHADE MAN MAZE

SIESTA IN FASHION

SOLAR DEPRIVATION TANK

RICE POWDER POOFS

TREE TRUCKS

ART SUNBRELLAS

TENT TOP TURBINES

KINETIC DANCE FLOOR FANS

ALOE RV WINDOW FILM

WIND FUNNELS

BAMBOO PLATFORMS

SWEET SWEAT STIM

HAND CRYO

WIND STACK

BEDOUIN COOL CAMPS

GREY WATER EVAPORATORS

BRC CITY RE-DESIGN

TENTS ON STILTS

KINETIC TREE CANAPES

SWAMP COOLERS

COLORS BY DESIGN

WWW HEAT HACKS

GRASS FROND SHADES

BIKE-POWERED FAN & MIST

NITROGEN COMPRESSORS

SOLAR IGLOOS

ESPRESSO SOS

RVs vs. CAR GATE LANES

BETTER BURNER BUSES



*BEHAVIOR CHANGE*



*TECHNOLOGY*



*ANCIENT WISDOM*





# INVENTIONS

- BEHAVIOR CHANGE
- TECHNOLOGY
- ANCIENT WISDOM

1



## HEAT COACHING

Before and during Burning Man, education and communication on how to acclimate to heat, prepare for heat and cope with heat. Focus on heat tolerance building.

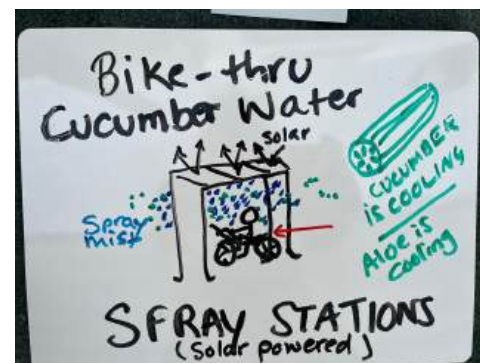
2



## COOL ROOF RULE

Incentives or fines to encourage vehicle and tent to be either white or reflective. Emphasis on creating sun-repellant and heat-reflection surfaces throughout BRC.

3



## BIKE-THRU CUCUMBER MIST

Solar-powered misting stations that spray cooling cucumber water. Designed to be biked through. Emphasis on cucumber's natural cooling properties.

4



## DRY ICE CO2 CATCHER

CO2 capture machine that converts the CO2 into dry ice, which is then used for cooling. Closed loop ice making. Could be managed by the ice camp (Arctica).

IMAGES GCREATED ON PLAYA

AI GENERATED IMAGE



# INVENTIONS

- BEHAVIOR CHANGE
- TECHNOLOGY
- ANCIENT WISDOM

5



IMAGES GCREATED ON PLAYA

AI GENERATED IMAGE



## BRC MAP FAN

Print BRC paper materials so they can be folded into hand fans. Provide the folding instructions to repurpose paper products into origami fanning devices.

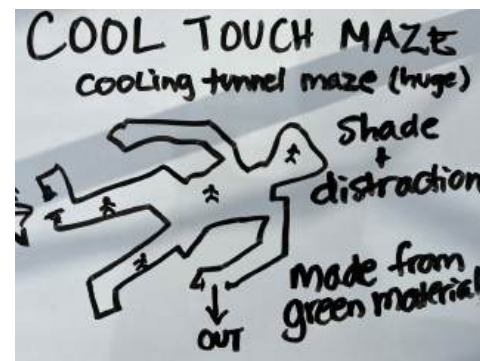
6



## MENTAL COOLING CAMP

Create spaces with cooling sights, sounds, vibes, scents and flavors to trick the mind into feeling cool. Multi-cooling-sensory salons help Burners chill.

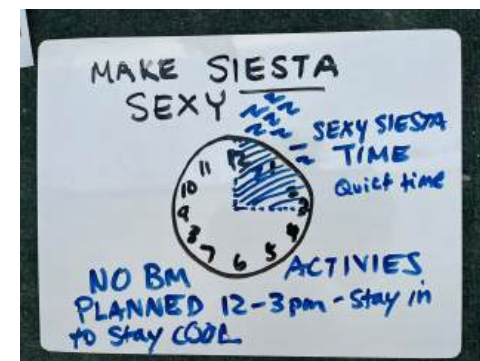
7



## SHADE MAN MAZE

Build a huge shaded tunnel maze, in the shape of a man, made from green eco-friendly materials, to distract the mind from heat and sun, and channel cool breezes.

8



## SIESTA IN FASHION

Discourage activities during the hottest times of the day, shifting schedules to evening hours. Create quiet siesta culture, to foster midday resting/napping.



# INVENTIONS

- BEHAVIOR CHANGE
- TECHNOLOGY
- ANCIENT WISDOM

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## SOLAR DEPRIVATION TANK

Like a floatation, but without water, pitch black (blackout) pods are cooled with solar power. Providing dark escape from the bleating sun.

10



## RICE POWDER POOFS

Powder bulbs filled with naturally cooling rice powder located near the porta potties use ancient wisdom to refresh. Poof near the poop.

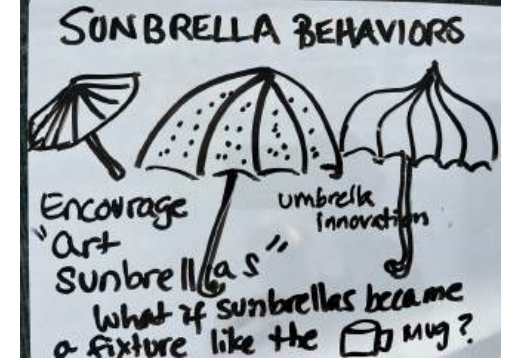
11



## TREE TRUCKS

On electric trucks, bring in flatbeds of shading palm trees, in a hydration substrate, to create avenues of shade trees, breathing cool air. Leaves circulating air.

12



## ART SUNBRELLAS

To encourage the use of individual hand-held sun-shading umbrellas, create competitions and umbrella adornment activities. Make sunbrellas cool parts of costumes.

IMAGES GCREATED ON PLAYA

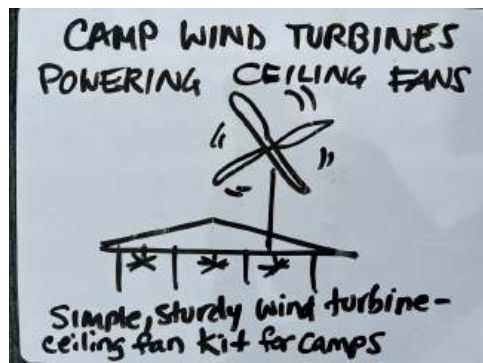
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# INVENTIONS

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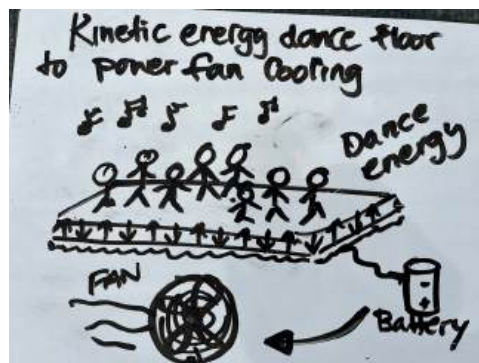
13



## TENT TOP TURBINES

Wind turbines affixed to the top of camps and tents, power ceiling fans to circulate air. Wind high above tents and camps powers smaller ceiling fixtures.

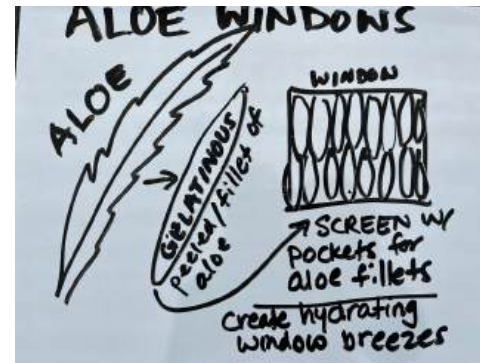
14



## KINETIC DANCE FLOOR FANS

The power generated from the energy of dancing is channeled into fans that keep the dancers cool. A closed loop of dance energy to mechanical cooling.

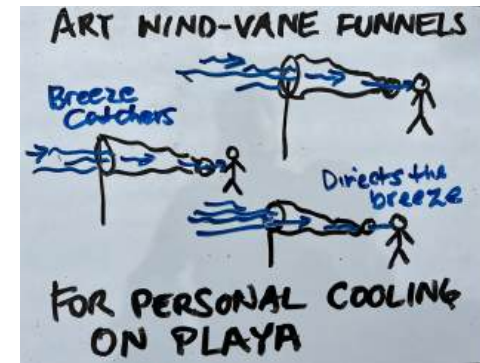
15



## ALOE RV WINDOW FILM

Transparent thin filets of aloe plant are pressed onto the window screen of an RV camper, which creates a cooling, hydrating sun filter from aloe in the air.

16



## WIND FUNNELS

Huge sock funnels in the air, high above the playa, catches and channels breezes down to the ground, to cool people off as they stand at the end of the funnel.

IMAGES GCREATED ON PLAYA

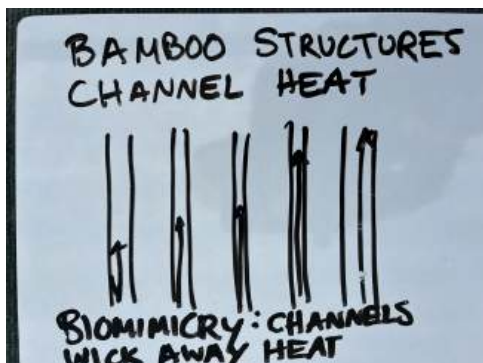
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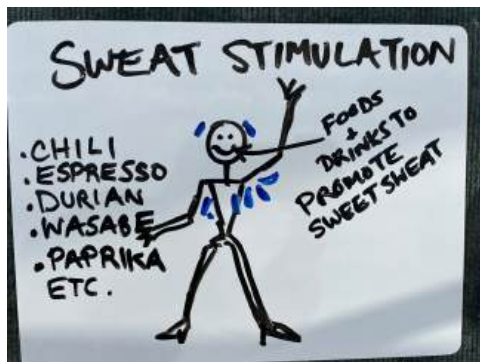
17



## BAMBOO PLATFORMS

Using the naturally cooling heat-wicking properties of bamboo, build platforms for tents and raised shaded living areas. The bamboo circulates cool air.

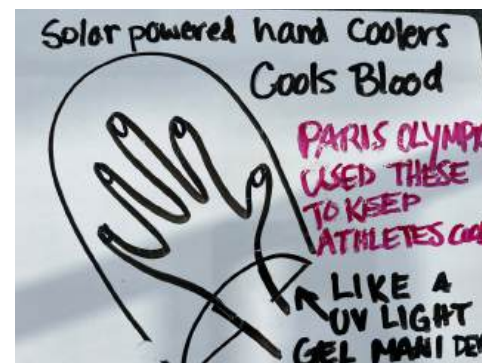
18



## SWEET SWEAT STIM

Encourage excessive sweating—nature's way to keep bodies cool. Promote sweet, nice smelling sweat with spices, foods and drinks from ancient wisdom.

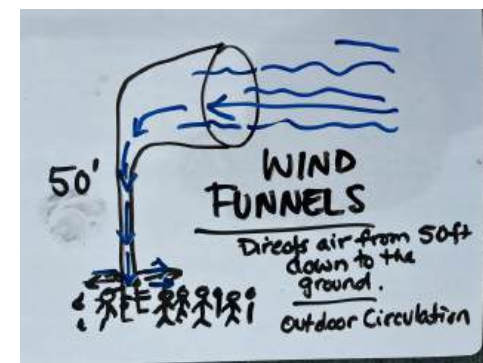
19



## HAND CRYO

As used by Paris Olympians, solar powered hand cooling devices chill blood vessels to cool down overheated bodies. These devices would be located everywhere.

20



## WIND STACK

Like a giant tuba funnel, or a steam ship's smoke stacks, this fixed funnel reaches high into the sky to capture and push cool air to people on the ground.

IMAGES GCREATED ON PLAYA

AI GENERATED IMAGE



# INVENTIONS

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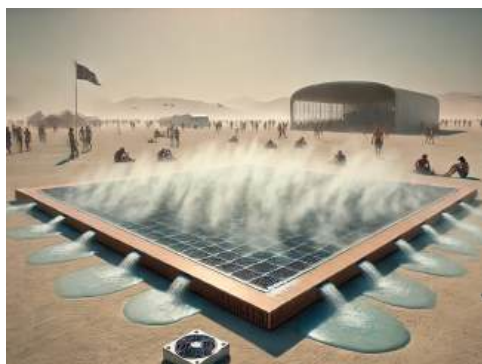
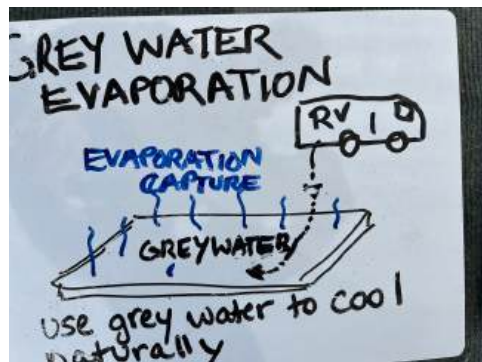
21



## BEDOUIN COOL CAMPS

Borrowing from indigenous desert cultures, Bedouin tent and camp designs are made from heat insulating materials. Camps use traditional construction earn credits.

22



## GREY WATER EVAPORATORS

Repurposing all the grey water produced by camps, into evaporation platforms. Instead of syphoning grey water into containers, repurpose it to cool.

23



## BRC CITY RE-DESIGN

Redesign the city for breezes, circulation and shade. Apply urban infrastructure and road design practices from desert cities. Optimize for shade and breezes.

24



## TENTS ON STILTS

The air is cooler higher, away from the desert flood. Creating elevated platforms, and stilted structures also creates shaded areas below.



IMAGES GCREATED ON PLAYA

**AI GENERATED IMAGE**

Synthetic Kinetic trees

Kinetic

Synthetic leaf

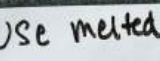
Bio motion

Leaf movement - generates power



Install synthetic trees with very large canopies, casting very long shadows, made from bio-matter. The leaf movement generates energy to power cooling devices.

Use melted 'ice water  
fo soak cloth




Recycle cooler  
water

Soaked cotton cloth  
over windows + tent  
openings will cool space



Cloths soaked in dirty water (grey water) from coolers are put over a tent's windows and air vents, creating cool air from evaporation.

ENCOURAGE COOLING COLORS  
+ PATTERNS FROM NATURE



MORPHO BLUE

SILVER ANTS

SNAKE STRIFES



Educate the community how certain colors and patterns (in nature) naturally cool. Morpho butterfly blue, silver ants, and black & white snake stripes reduce heat.

ways to stay cool

← cool

Info + Advice on how to stay cool

What? Where? When?

HACKS, TRICKS, TIPS

on a fan!



Add a section to the *What? Where? When?* booklet on tricks, tips and hacks to beat the heat. Ensure the Info team in Center Camp share cooling techniques.

## ● BEHAVIOR CHANGE

## TECHNOLOGY

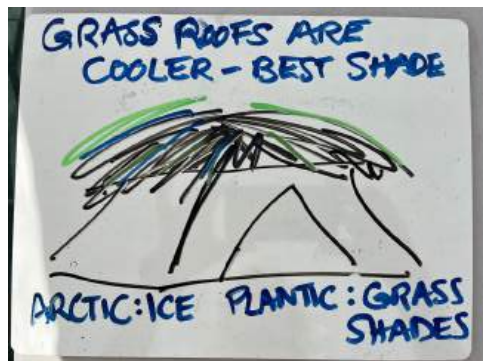
**ANCIENT WISDOM**



# INVENTIONS

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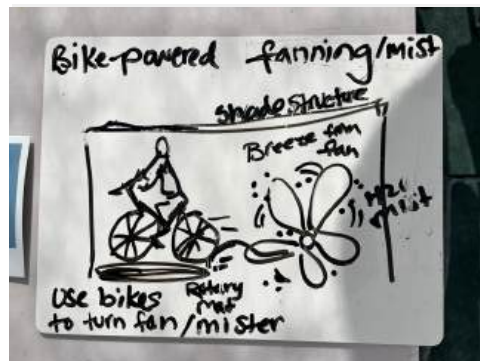
29



## GRASS FROND SHADES

Shades and umbrellas constructed from woven local grasses, suspended or propped over tents like Monkey Huts. Designed and produced with local communities on local land, from local grass.

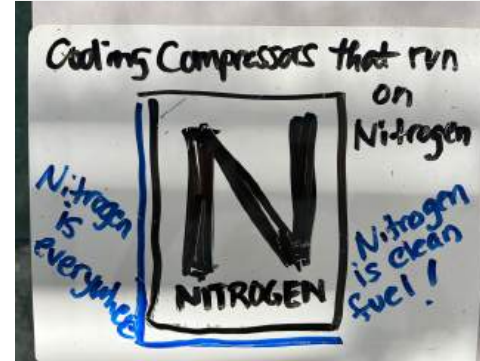
30



## BIKE-POWERED FAN & MIST

Fanning and misting pit stops powered by bikes. Bike can be stationary, or personal bikes can be attached to a fan belt and turned into a stationary bike.

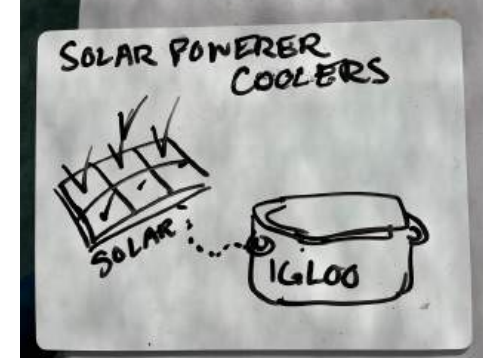
31



## NITROGEN COMPRESSORS

Since nitrogen is everywhere, build cooling compressors that refrigerate from nitrogen fuel. Invent a nitrogen fuel ecosystem and give credits to N-powering.

32



## SOLAR IGLOOS

Build and distribute solar panels that are connected to refrigeration devices that attach to standard coolers, like a cooler accessor or add-on.

IMAGES GCREATED ON PLAYA

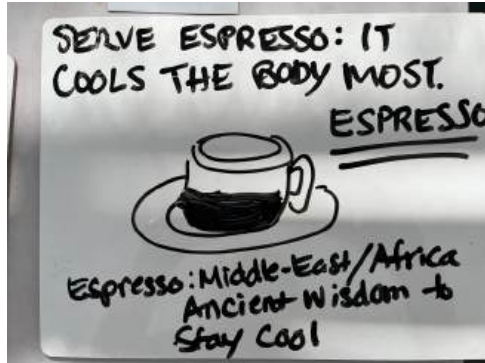
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# INVENTIONS

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IMAGES GCREATED ON PLAYA

AI GENERATED IMAGE



## ESPRESSO SOS

Coffee, especially espresso, is an ancient and effective way to cool the body. Encourage more espresso drinking on playa to cool bodies from the inside out.

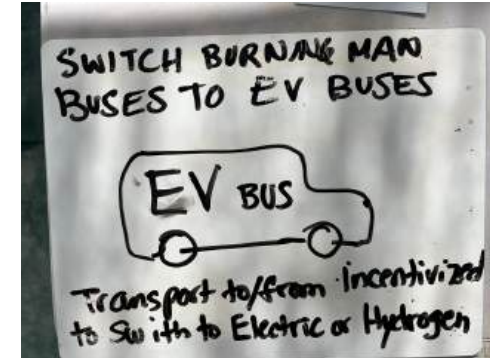
34



## RVs vs. CAR GATE LANES

Since RVs take longer to inspect at the gate entry, cars need not idle and wait behind RV inspections. Separate cars from RVs to reduce idling.

35



## BETTER BURNER BUSES

Incentivize the bus transportation companies to/from the festival to switch to electric vehicles (EVs) or Hydrogen power. Reward CO2-less Burner Buses.



***WHAT  
NEXT?***







***Burning Man has a history of spawning startups like Black Rock Solar, Portable Electric, and Symmetry Labs. The Burner community of makers and entrepreneurs is connected to investors, some of the ideas generated in this sprint should find their way to the market at real world solutions.***







# NEXT STEPS: PROTOTYPING THE INVENTIONS

## 1 Sharing the Outcomes

**SHARE INVENTIONS:** The 35 co-created inventions need to be communicated to the Burning Man community to create awareness. This can be done several ways with the Burning Man Communications team: Zoom presentation webinar, articles, speaking at events, etc.

**START REFINING THE IDEAS:** Sharing out the inventions will help with optimizing the ideas, and with selecting concepts to prototype and/or raise production funding or investors.

## 2 Selection & Prioritization (Voting & Ranking)

**INNOVATION CRITERIA:** The Burning Man organization needs to identify the 3-5 innovation selection criteria. The innovation criteria should reflect the Burning Man priorities and principles.

**SCORE THE IDEAS:** Once the criteria have been identified, then the 35 co-created inventions can be "scored" against the criteria to rank them. This will inform decision-making about prioritization, including possible voting on the inventions to keep, drop or change.

**VOTE & RANK THE IDEAS:** Voting can be opened-up to the Burning Man community with a simple poll, promoted on social media and the Burning Man website.

## 3 Stewardship & The Chief Heat Officer

**FIND IDEA OWNERS:** Once the top 10 co-created inventions are identified, then "owners" should be assigned to be stewards of each of the ideas.

**OWNERS LEAD EXECUTION:** These people will oversee the execution and management of the ideas, which might include sourcing partners, identifying makers and creators, and raising investment capital.

**FIND A COOLING OWNER:** In addition, consider appointing a [chief heat officer](#) dedicated to heat mitigation (perhaps a 2-year rotation role), and cooling communications.

## 4 Fundraising & Execution

**FIND SPONSORS:** Many ideas and inventions need sponsorship. As needed, funding and investment can be sourced to bring the ideas to fruition and to scale inventions.

**ENCOURAGE START-UPS:** Prototypes might evolve into small businesses which are owned independent of Burning Man or in partnership with Burning Man. Crowd-sourced funding and execution (e.g., Kickstarter) is an option.

**SYNERGIZE WITH ART:** Some of the inventions lend themselves to art installation. Collaborate with the Art Dept. on possible art grant funding or synergies.





***Burning an has the perfect conditions for invention:  
limited time, intensity, deprivation, stimulation,  
maker-mindset, open minds, constraints,  
contradictions and mashups, diversity-inclusion-  
belonging.***

***This is a perfect storm for innovation and it ought  
to be leveraged to solve world problems.***







# NEXT STEPS: INNOVATION @ BURNING MAN

## 1 Business Partnership Policy

### EMBRACE THE PRIVATE SECTOR:

The business world is not the enemy of Burning Man. Business can be leveraged to help scale Burning Man, and to help it evolve into a more impactful, world-changing organization.

### REFINE POLICY TOWARDS

**BUSINES:** Reframing “business” to be a resource and collaborator for the Burning Man organization will require new policy and ways of thinking and working. Such as, the “Principles of engagement for value aligned commercial entities.”

**INVITE BUSINESS IN:** The business world desperately needs and seeks the innovation potential of Burning Man. Find ways to leverage this.

## 2 Innovation Lab

### FORM An INNOVATION

**COMMUNITY:** Burning Man is a natural innovation laboratory. However, to maximize the innovation potential Burners with innovation experience ought to be brought together to form a lab: Burning Man Innovation Lab.

**CHAMPION INNOVATION:** This lab cum task force (formal or informal) would project manage execution and champion innovation, to ensure that innovation is managed with the Burning Man ethos.

**OVERSEE EXECUTION & KPIs:** The Burning Man Innovation Lab would manage a pipeline of inventions, and attract partners, manufacturers, inventors and investors.

## 3 2025 Innovation Challenges & Goals

### ESTABLISH 2025 GOALS:

Innovation needs structure and direction. As was done in 2024 with the “sustainable cooling” challenge, the Burning Man organization, along with the the Burner community, should identify the innovation focus for 2025.

### CONSIDER MAINTAINING

**COOLING :** The innovation challenges for Burning Man 2025 should be communicated and promoted as soon as possible to give enough time for planning. The Innovation Lab would use its’ Challenges & Goals to guide activities throughout 2025. To build on the momentum of the focus on heat/cooling, maybe the 2025 Innovation Goals should remain the same?

## 4 Innovation on the 2025 Program Agenda

### LEVERAGE FUTURISM IN 2025:

The festival’s 2025 theme, Tomorrow Today, is ideal to launch the Burning Man Innovation Lab and Burning Man’s policy and approach to innovation.

**PUBLISH A POV :** The Innovation Lab could produce a point of view on the future of the Challenge topic, supported by research in 2025.

### REPLICATE EFFORTS AT

**REGIONAL BURNS:** Global and regional events such as AfrikaBurn and Firefly can dovetail the planned BRC innovation activities planned for pre-, during- and post-playa activities.





***The Coolopoly game was loads of fun to play with strangers and an excellent ice breaker. It created awareness of simple cooling solutions, and the game inspired inventing and innovation thinking.***





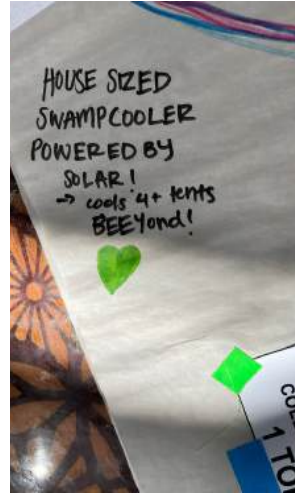


# NEXT STEPS: COOLOPOLY ON THE ROAD

## I Coolopoly Game Roadshow

**LEVERAGE THE GAME FOR FUNDRAISING & AWARENESS:** Take the customized Coolopoly game to Burning Man markets to play the game around the world to:

- Create awareness about climate change, specifically heat (a world of extreme heat).
- Demonstrate Burning Man's commitment to heat mitigation and CO2 reduction.
- Inspire people to start thinking about ways to mitigate, prepare for and live with extreme heat.
- Continue inventing solutions to keep Burners cool without CO2..
- Raise funding for cool inventions and programs (as well as Burning Man organization).







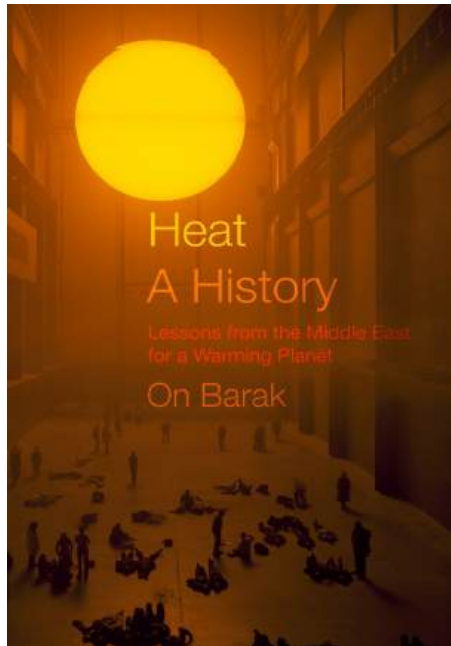
PN

**FOR REFERENCE**

**APPENDIX**



# INDIGENOUS INSPIRATION



A number of indigenous inspirations and Ancient Wisdom cooling techniques were sourced from this new book by On Barak.



**Al-Khattara:** Traditional Moroccan technique using underground water channels to cool homes.



**Earth Sheltering:** Building partially or completely underground to take advantage of the earth's stable, cooler temperatures.



**Clearstory Windows:** High windows that allow hot air to escape and cooler air to enter, used in ancient Egyptian and Greek architecture.



**Thatched Roofs:** Used in tropical regions, thatched roofs provide excellent insulation and allow air to circulate, keeping interiors cool.



**Qanats:** Underground channels that transport water from mountains to arid regions, cooling the air and providing water for irrigation and cooling purposes.



**Mashrabiya:** Wooden latticework screens used in windows to provide shade and allow ventilation while maintaining privacy.



**Siestas:** Taking midday breaks or siestas during the hottest part of the day to avoid heat exposure.



**Wet Clothes on Windows:** Hanging them in doorways to cool incoming air.



# INDIGENOUS INSPIRATION



**Light & Loose Clothing:** Light-colored clothing such as tunics and robes to reflect sunlight and allow air circulation.



**Head Coverings:** Using hats, headscarves, or turbans to protect the head and face from direct sunlight.



**Malqaf :** Towers designed to catch and direct cooler breezes into buildings while expelling hot air..



**Atriums:** Central atriums in a tent that facilitated ventilation and cooling..



**Wet Cloths** Using damp cloths on the body to cool with evaporation.



**Water Features:** Fountains and pools cool the air through evaporation.



**High Ceilings:** Allow hot air to rise, keeping living areas cooler



**Bedouin Tent Design:** Allow hot air to rise, keeping living areas cooler



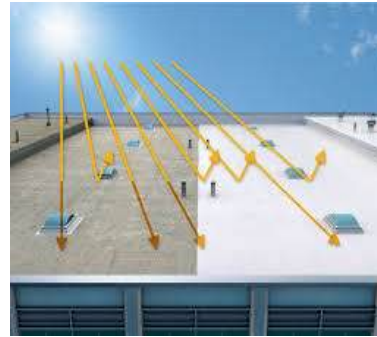
# BIOMIMICRY INSPIRATION



**Ant Hill Cooling Pattern:** Light-colored clothing such as tunics and robes to reflect sunlight and allow air circulation.



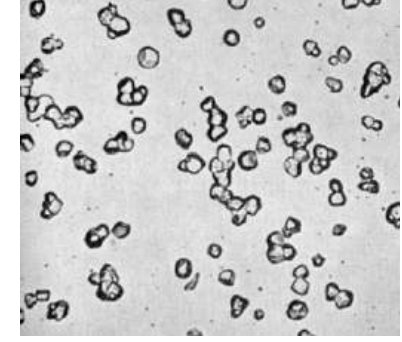
**Morpho Blue:** Reflective blue of Morpho butterfly wings reduce temperature of a car surface by 60F.



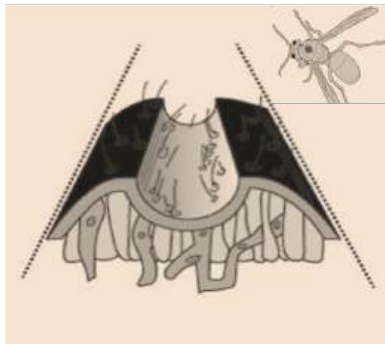
**Ultra White :** White scales inspire ultra reflective white reflecting 6-90% of sunlight.



**Aloe Vera:** Natural cooling properties of aloe vera gelatinous flesh.



**Rice Powder:** The polyhedral rice powder granules absorb moisture and heat.



**Wasp Cuticle:** The cuticle of wasp hairs cool with thin layers and tracheal branches.



**Sweating:** Animals stay cool by excessive sweating.



**Fan Shape:** A fan shape of leaves channels air and evaporation.



**Black & White Stripes:** Stripes have a cooling property.



**Large Ears:** Allow hot blood to connect with cool air to cool circulation.



# TECH & DESIGN INSPIRATION



**Self-Cooling Concrete:** Modu x Transsolar concrete is cast in a corrugated pattern that dissipates heat.



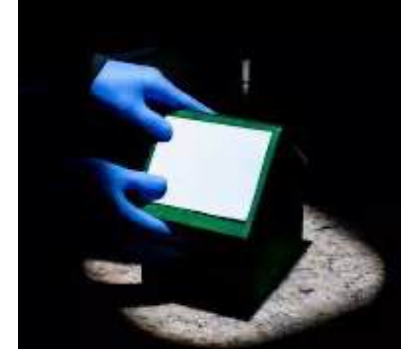
**Pocket Forest:** The SUGi Project has planted 160 green spaces in urban areas to cool from greenery.



**StayCool Suits:** Vests by Techniche keep construction workers cool..



**SkyCool Systems:** "radiative cooling" panels cool buildings without using electricity.



**Planck Energies:** "Passive cooling" uses highly reflective surfaces to radiate heat away from surface.



**Absorption/Sorbption Cooling:** Uses heat to produce cooling, by taking advantage of material properties.



**Lubex Sapphire Ice Cooling IPL Hair Remover:** Utilizes quadruple ice cooling technology that cools surfaces.



**CoolMitt:** Palmer cooling technology cools blood flow.



**Cool Human Body Mister:** Blows both air and mist simultaneously under a shirt



**VAYU Tower Cooler:** Evaporative air cooling technology.



# ***SURVEY OF 55 FUTURISTS***

1. What is the future of cooling? What is cooling in the future?
2. What could a Ministry of the Future do to sustainability protect people from extreme heat?
3. How can the futures industry help build a sustainably cooler world?
4. What images of living comfortably in extreme heat and cold come to mind from SciFi that might be inspiration for real world solutions?
5. Where should we look for non-obvious cooling strategies and solutions?
6. How might robots and AI be used creatively to cool people, plants and animals?
7. What emerging sciences and technologies ought to be explored to sustainably keep life cool?
8. As futurists, how do we protect life from extreme heat?
9. What trends should we be watching?
10. What people or communities should we be following and involving as we search for cooling strategies and solutions?

**Survey platform: SurveyMonkey**

**N=55 Professional Futurists**

**Fieldwork: July 29-Sept 6, 2024**

**10 Open Ended Questions**

**100% Completion**

**Average Time: 16 minutes**

**ASK TO SEE THE SEPARATE REPORT ON THIS PIECE OF RESEARCH**





# POLAROIDS FROM THE PLAYA



SUNBRELLA  
FASHION



SWEAT STIM



Soft. Wind Funnels  
out on Playa



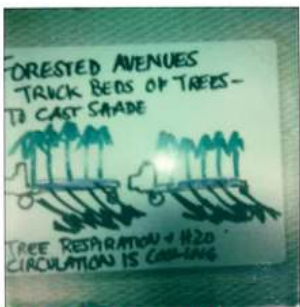
HAT W/ LAYERS  
OF AIR



GREEN BUSES.  
BURNING MAN TRAIN?



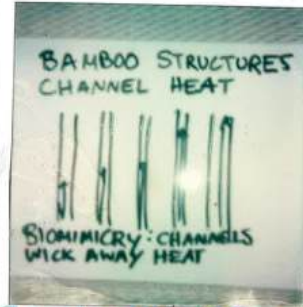
WWN AS A FAN  
COOL TIPS, TRICKS



TRUCKED-IN  
SHADE FORESTS



COOLING COMPRESSOR  
THAT RUNS ON NITROGEN



RAISED CAMPS -  
USE BAMBOO



Heat + Coaching  
Chief Heat Officer



PROMOTE  
ESPRESSO DRINKING



CO2 → DRY ICE



# POLAROIDS FROM THE PLAYA



THATCHING  
GRASS ROOFS/SHADES



BIKE-FAN/MIET  
STATIONS



BIOMIMICRY:  
COOLING NATURE



MELTED H<sub>2</sub>O →  
SOAKED CLOTHS



ALOE WINDOW  
SCREENS



SMARTER VEHICLE  
TRAFFIC MGMT.



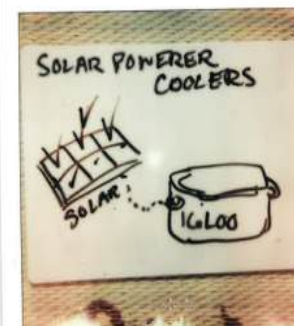
KINETIC LEAVE "TREES"  
SHADE + POWER GEN.



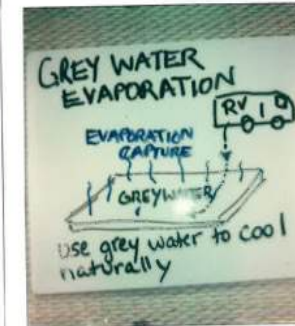
SOLAR  
DEPRIVATION  
TANK



RICE POWDER  
PUFFS



SOLAR TO COOL +  
MAKE ICE



GREY WATER  
EVAPORATORS



COOL CAMPS -  
ANCIENT WISDOM



# POLAROIDS FROM THE PLAYA



GO UP ↑ WHERE THE BREEZE IS



BLOOD COOLING VIA HAND/MIT COOLER



KINETIC DANCE FLOOR



BIKE-THRU CUCUMBER H<sub>2</sub>O SPRAY STATIONS



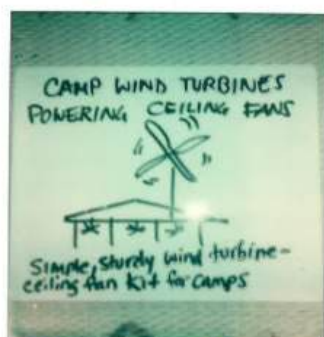
WIND CORRIDORS KITES FOR SHADE



BRC MAP-FAN



Breeze catchers throughout BRC



CAMP WIND TURBINES/FANS



Change Mindsets to adapt to heat



New BRC city Design: Cool-friendly



MULTI-SENSORY MENTAL COOLING



COOL ROOFS WHITE OR REFLECTIVE



# 10 PRINCIPLES OF BURNING MAN

## This Program of Activities Leaned in Hard on 3 Principles

✓ **Radical Inclusion:** Anyone may be a part of Burning Man. We welcome and respect the stranger. No prerequisites exist for participation in our community.

**Gifting:** Burning Man is devoted to acts of gift-giving. The value of a gift is unconditional. Gifting does not contemplate a return or an exchange for something of equal value.

**Decommodification:** In order to preserve the spirit of gifting, our community seeks to create social environments that are unmediated by commercial sponsorships, transactions, or advertising. We stand ready to protect our culture from such exploitation. We resist the substitution of consumption for participatory experience.

**Radical Self-Reliance:** Burning Man encourages the individual to discover, exercise, and rely on their inner resources.

**Radical Self-Expression:** Radical self-expression arises from the unique gifts of the individual. No one other than the individual or a collaborating group can determine its content. It is offered as a gift to others. In this spirit, the giver should respect the rights and liberties of the recipient.

✓ **Communal Effort:** Our community values creative cooperation and collaboration. We strive to produce, promote, and protect social networks, public spaces, works of art, and methods of communication that support such interaction.

**Civic Responsibility:** We value civil society. Community members who organize events should assume responsibility for public welfare and endeavor to communicate civic responsibilities to participants. They must also assume responsibility for conducting events in accordance with local, state, and federal laws.

**Leaving No Trace:** Our community respects the environment. We are committed to leaving no physical trace of our activities wherever we gather. We clean up after ourselves and endeavor, whenever possible, to leave such places in a better state than when we found them.

✓ **Participation:** Our community is committed to a radically participatory ethic. We believe that transformative change, whether in the individual or in society, can occur only through the medium of deeply personal participation. We achieve being through doing. Everyone is invited to work. Everyone is invited to play. We make the world real through actions that open the heart.

**Immediacy:** Immediate experience is, in many ways, the most important touchstone of value in our culture. We seek to overcome barriers that stand between us and a recognition of our inner selves, the reality of those around us, participation in society, and contact with a natural world exceeding human powers. No idea can substitute for this experience.



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