

DESERT DISCOVERY CENTER SCOTTSDALE WORKSHOP 1, 8–14 AUGUST 2016 SUMMARY OF OUTCOMES 2016.08.26

This summary follows an information-gathering trip by the Thinc team to Scottsdale and Phoenix 7–14 August 2016 (“Workshop I”). We are grateful to the Desert Discovery Center Scottsdale and the many organizations and individuals who made time to meet with us.

This is an extraordinary project with passionate local commitment. We are inspired by the investment and dedication of Scottsdale to the preservation of its local desert environment. The Desert Discovery Center has the potential to build local prominence and global awareness of the Preserve as a landmark project for ecological system preservation and education. Throughout the week we encountered not only a wealth of generously shared information, we also witnessed a desire to push past assumptions and norms and find creative and innovative solutions: in design, in sustainability, in education, social equity and experience. Solutions that reflect the local community *and* situate the Center on a world stage.

Aspirations

We have identified the following touch-points that stood out from the week’s discussions:

The DDC should build anticipation for exploration

“We are all curious about our environment: we are all scientists”

- Lindy Elkins-Tanton, Director, School of Earth and Space Exploration, ASU

The Desert Discovery Center should be an experience that stirs people's imagination, curiosity, and sense of discovery. People should share a sense of awe and delight at what the Center *reveals* about the Preserve: a thriving desert environment. They should be excited about their own figurative or literal journey into the landscape, and what they might discover. For those who cannot hike, that might be an immersive theater experience. For many, it will be their first exposure to the real desert. The Center is a threshold, the beginning of a great adventure. It is also the place that people will return to for questions unanswered, and to deepen and expand their journey of exploration.

The DDC should educate

We heard strong support for the educational mandate of the Center. Alignments with STEM and STEAM frameworks will inform design concepts and exhibits.

For all visitors, there will be opportunities to discover more about the desert systems, cycles and species, history and land use. Our approach will encourage social engagement and intergenerational learning for families, with experiences, interactivity and live programming. These are strategies that can “open people up” to exploring. They include encounters with live species brought in by rescue organizations, and guided outdoor experiences. Visitors will be equipped with knowledge that will enrich their experience in the landscape.

In a place of active learning, people build respect and empathy for their environment—natural and built, ecological and cultural. Exploration is empowered by knowledge and can transform into stewardship.

Local native communities speak of seven generations as a way to consider our responsibility for what we provide for the coming generations: our stories, our customs and knowledge,

our impact on the land. Education is an essential partner to the work of ecological preservation

The DDC should support tourism

“The desert is the signature of Scottsdale”.

- Kim Cole, Director of Guest Services, Four Seasons Scottsdale

We learned that Scottsdale’s tourism industry is witnessing a shift in travelers’ priorities to a preference for *experiences*. Many people seek experiences that connect them with the “real place”: authentic knowledge, cultural practices and activities. People want to know what is unique and special about a place, and often seek out the one or two experiences that will fulfill an accurate understanding of the environment and history.

The Desert Discovery Center is not only aligned with tourism trends, it has the potential to be the:

“Quintessential Scottsdale/Sonoran Desert must-see experience that makes people fall in love”

- Pam Gilbert, Fairmont Scottsdale Princess

If designed to demonstrate sustainability and sensitivity to its environment, the Center can be a landmark tourism destination in part based on its design and architecture alone. As a gateway to a desert experience, the Center will not only engage people with the Sonoran Desert and the Preserve, it can assist people with practical information about a safe and enjoyable hike. It provides amenities for a comfortable desert experience and a variety of things to do for different ages and interest groups. All of this is of course also relevant for local visitors. Grounding the experience in Native American concepts adds another layer of local authenticity for visitors.

The Center is ideally placed to align with the strategy of the Scottsdale Tourism Advisory Task Force, currently working on partly redefining Scottsdale as a destination for “family and adventure”. The Taskforce also has a long-term plan for interpretation on climate and ecology in the desert. Their research shows that experiences like the Center and the desert are of great interest to future generations and family.

The DDC should inspire future generations to preserve and protect

Understanding that biodiversity is critical for the planet—and recognizing the Preserve’s role—will be an important part of the Center’s story: this is a theme we heard in many discussions. The story of the Preserve is also an invitation to all visitors to see the potential and value of local preservation, at all scales, and it will inspire local pride and ownership that will grow stewardship in current and future generations.

The Center and its partners should play a visible role in conservation of the desert environment that inspired and informed the creation of the Preserve. The Preserve has been a place of human habitation and use over many generations. It tells a rich story of human impact and restoration, a story that is inspiring. It demonstrates local dedication and is part of a global movement to restore ecological systems.

The Preserve has facilitated research and conservation through the McDowell Sonoran Conservancy. Arizona State University has robust programs that would expand beyond these programs. All of this should be accessible to visitors to the Center through exhibits, live interpretation, guided tours and programs. The Center could also be a venue for international symposia to share research on desert species, arid environments, and urbanization—particularly for regions facing increasing aridification.

The DDC should show people the “world of the desert”

The desert cannot be seen in a day, or on a single hike. Diurnal and seasonal cycles—and how species respond—are parts of a fascinating system and open our eyes to the workings of the environment and species adaptations. There are also things happening below the surface and inside plants that most of us cannot see, as well as off-trail locations where species are known to congregate, or ancient sites with petroglyphs that must stay undisturbed.

This is the “world of the desert,” and it will inform the narrative for the Center, revealing what we cannot always see, what remains hidden, what happens at all times of the year and the day, and why.

The DDC should be inclusive

“The Desert Discovery Center could be a tipping point to bring the Scottsdale communities together.”

- Melinda Gulick, former Chair of the McDowell Sonoran Conservancy

During our discussions it became obvious that desert hikes are a popular and beloved activity for many residents. But we also heard that there are many people in Scottsdale and Phoenix that do not hike or have access: people with disabilities or of an age that prevents them from enjoying a hike, families without transport to get to a trailhead, or without awareness that the Preserve is open to them, as well. We also heard a desire to engage all ethnic groups; importantly the Native American community and Latino residents. Given local investment in the Preserve, how can the Center demonstrate that it is inclusive of constituent communities?

Design planning will address accessibility for all visitors, including experiences that can replicate some of how the

desert *feels* for those who cannot have a direct encounter. We also suggest that public transport to the Center is an important point of discussion for the City.

Native American worldviews on the species, ecological systems and cycles of the desert will be an integral part of the content, and inform the design. We also see much potential for indigenous concepts to inform the strategic framework for the Center: our responsibility for seven generations into the future, a deep respect for the landscape and models for resilient resource use—all highly relevant for local and global sustainability. An ongoing partnership with the Salt River Pima Maricopa Indian Community could also include training young Native Americans as docents, developing live programming and guided desert hikes with a focus on indigenous knowledge of the desert.

The DDC should be a model of sustainable design and practice

What does sustainability mean for the Desert Discovery Center? This should be a holistic plan that informs the strategic direction of the Center. We gathered a lot of useful feedback about the potential impact of the Center; these comments aim to reflect concerns and discussions, and will be addressed in collaborative planning with DDCS and the architects:

In its architecture and exhibit design, the Center should be sensitive to the landscape and create the least amount possible of visual interruptions and impact on the environment. The eventual size of the Center has been of particular concern and we should aim to define its size in terms of what is needed to achieve the mission and economic and environmental viability. In its operations, the Center should follow practices for sustainable cohabitation with neighboring residents, including traffic and parking management.

Not only will the Center demonstrate sustainable practices in its build and operations, it can be an exemplar of best practice construction and systems in arid regions. Working in collaboration with the architects, we will fully interpret the building's infrastructure for visitors and we see it becoming a venue for discussions about sustainable practices and what it means to function in synchrony with the environment.

The Center can also be a model for economic sustainability in the development of its audience and of revenue streams, and a financial model that continues to attract operational funding for maintenance and for updating content and exhibits with new research and technologies. The ASU partnership will play an important role in this strategy, as part of a model for collaboration with numerous partners.

Finally, the Center can demonstrate social and cultural sustainability through a mandate for education and inclusion, as outlined above, informing a long-term objective for local stewardship. In all these ways, the Center can demonstrate a commitment to the vision for sustainability that informed the Preserve Ordinance and the Preserve's creation. It will also increase visibility of the Preserve on a local and global stage, ensuring its longevity for coming generations.

Content

The following notes outline a broad range of possible content themes, topics and stories, all for much more careful analysis and development into a cohesive narrative. This list reflects the wealth of material we encountered. Our focus will likely begin with *systems and how species interact with the environment and each other*. As noted above, the exhibits will also *reveal* what cannot always be seen:

- The desert invites discovery and exploration: it is filled with life but can appear uninhabited. Look closer and the

environment is thriving with plant and animal life; cycles of rain and growth... it reveals an extraordinary geology, biodiversity and dynamic cycles. (What happens inside a saguaro skeleton, what does a haboob feel like, what does rain on the desert smell like, the sounds of insects and spadefoot toads, the intensity of heat and contrast with shade...)

- The day/night and seasonal cycles and climatic events of the desert: changes in the environment that are not always visible. Haboobs have started occurring in the region where they pick up loose soil, eroded from ranching and military use.
- Life cycles: e.g. saguaro skeletons become habitats for lizards and others. Plants bloom at different times, keep their own schedule in response to limited pollinators.
- The *unique* features of the Sonoran Desert and Preserve environment, the diversity of its 30,000 acres: different systems south, north, diverse plant life, visible changes in density, ecotone, 2 rain seasons.
- Things in the Preserve that cannot be seen by visitors or hikers (many to remain undisclosed) water hole, petroglyphs, archeological sites, eagle nests, closed trails: demonstrate the meaning of preservation, and why.
- How the Preserve works as an ecosystem e.g. its relationship with Tonto National Forest: the two areas create a single ecological system large enough to support apex predators— lions, coyotes, raptors, bobcat, a few bears—and prevent an ecological island. The impact of invasive plants.
- Geology: globally, desert geological markers include calcium carbonate, (caliche); desert varnish and soil crust.

Petroglyphs are chipped into the rock varnish. The soil crust is a living organism attracting a lot of research.

- Water: the water cycle in the desert and in the Preserve, and the history of water management and conservation in the region (from Hohokam canals to Indian Bend Wash, xeriscaping) and its global relevance. Changing weather and rainfall patterns and their effect on the ecology of the Preserve. The alluvial fan in the north and how the water moves through the Preserve.
- The relationship between people and place—the impact *and* potential of humanity’s relationship with the environment.
- Human habitation: the heat and scarcity of water represent a challenge to human needs. Yet deserts are homelands that people have adapted to with food, water and technology. What is the future of urbanization in deserts? A positive outlook on sustainable urbanization: cities as forces for good, preservation in the urban environment, models for living in synchrony with preserved areas. Innovation, sustainable energy...
- The history of use, and how the system is restoring and healing: historic layers of use include Native American habitation, ranching, grazing, hunting, mines and minor agriculture, 4-wheeling, motorized dirt bikes, bonfire partying, and garbage dumping. The ecosystem has only been in its current stable state for about 4000-5000 years. Ranchers may have cleared bigger trees and saguaro, and it is only about 60 years since ranching. Heavily ranched areas are now very compacted: the ants are playing a significant role in healing the soil. ATV impact can take 100 years to recover. 400 miles of trails were reduced to 200 miles.

- The Preserve. The desert is fragile yet hardy. What is our role? The story of the Preserve (including role of the Commission and the Conservancy): started as a vision for sustainability—30,000 acres of preserved ecosystem, where the city doesn't have to extend infrastructure: power or water; protection against further development. The Preserve now as a model for restoration and ecological systems protection and research, can and must be sustained with human intervention. Local preservation efforts are a global movement.
- Indigenous life in the desert (living, not surviving): knowledge about the cycles and systems of the desert and knowledge of harvesting food and medicine from its flora and fauna, making baskets and pots, cultural practices and ceremonies associated with life in the desert. Keeping oral stories alive. Annual gathering times for plants: crops included mesquite beans, saguaro fruit and Prickly Pear fruit, legumes; three sisters planting.
- Live displays: insects and reptiles (in partnership with the Phoenix Herpetological Society) and daily appearances from rescued birds and mammals (Liberty Wildlife, Southwest Wildlife and others.)

Practical advice:

- How to care for local flora and fauna, and why.
- How to interact with the animals in your urban environment, too: e.g. how to deal with a snake or a bobcat.

Arizona State University Research areas

General areas of relevant research

- Geology, soil, water
- Biology and biodiversity

- Ecology, Adaptation, Environmental Life Science
- Sustainability
- Urbanization
- Biomimicry

Design process

Communication

We encountered a range of perspectives on the Desert Discovery Center in Scottsdale. The lasting impression was that a Center is welcome, but have heard concerns about its location and potential ancillary uses.

Every stakeholder we met expressed a connection if not love of the Preserve and the Sonoran Desert. We can see that it will be critical to maintain open communication with all constituents as we go through this process, and we would like to make ourselves available to present or participate in discussions and hope our presence and experience with multiple perspectives and competing claims can be a benefit to the City's public participation process.