

PRACTICE PAPER

Canalscape: Practising Integral Urbanism in Metropolitan Phoenix

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ABSTRACT *Just as a good manager builds on existing strengths of an organization, so good urbanism builds upon given assets of a place. 'Integral urbanism' begins by engaging communities to identify such assets and consider how best to leverage them. In this way, it sets a generative and dynamic self-adjusting feedback mechanism into motion, where communities build creatively upon their strengths, sometimes in the process even converting their greatest problems into the greatest solutions. In Metropolitan Phoenix, integral urbanism has been practised with canalscape, a distributed system of vital urban hubs where canals meet major streets. Canalscape will offer an alternative to sprawl, highly desirable live/work settings, and much-needed places to gather, significantly contributing to urban and economic revitalization. Practising integral urbanism, this re-orientation of urban growth and development along the canal banks leverages an existing asset, offering an authentic and sustainable desert urbanism for the Phoenix region.*

Live Theory: Integral Urbanism

In recent years, the walls between the university and communities have been growing increasingly porous as outcome-oriented research has grown in prevalence over so-called 'pure' research without a priori intended application. The theory generated by, and informing, outcome-oriented research has been described as 'live theory' (Shashi Caan, 2004, personal communication). Live theory has been venturing beyond conventional theory's role of describing what occurred in the past or is taking place at the moment, to more prescriptive terrain. Live theory presupposes that ideas are intertwined with those who transmit them and the channels by which they are transmitted. Implicit in live theory is an understanding that ideas circulate the globe, have impacts, and get passed down through generations, appropriated and adjusted along the way. In other words, live theory is *lived*.

'Integral urbanism' (Ellin, 2006) is one example of live theory, learning from best practices (description) with the goal of informing authentic and sustainable urban

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interventions (prescription). Integral urbanism learns from a range of restorative efforts to heal the wounds inflicted upon the landscape over the last century, apparent at all scales, from the wastebasket to the watershed. While not forming a 'school' of thought, since expressions vary widely, this considerable undercurrent shares an emphasis on: (1) drawing from the best aspects of pre-modern, modern and postmodern urban design; (2) incorporating new technologies in a humane way; and (3) respecting physical, historical, social and environmental contexts.

Bringing together the functions separated during the twentieth-century city—living, working, circulating, learning, creating and recreating—these best practices also integrate buildings with nature, centre with periphery, local character with global forces, the various professions involved with urban growth and development, and people of different ethnicities, incomes, ages and abilities. The result is a reorientation in urban design theory and practice, ranging from small-scale interventions to regional plans, that is restoring health and well-being to the contemporary city by redressing the negative impacts of sprawl and environmental degradation along with the growing perception of fear and declining sense of community.

To transmit the lessons imparted by these best practices, integral urbanism distills five qualities contributing to their success: hybridity, connectivity, porosity, authenticity and vulnerability. *Hybridity* and *connectivity* bring activities and people together. While modern urbanism espoused the separation of functions, integral urbanism reaffirms their symbiotic nature by combining and linking them. These various integrations can be accomplished through cross-programming buildings and regional plans, spatially (plan and section) as well as temporally. Examples of cross-programming include the office building with basketball court and daycare centre, the intergenerational community building (combining day care, teenage community centre, adult education and seniors centre), the public school/community centre, the integrated parking structure (into office, residential and office buildings), the movie theatre/restaurant, and the urban plaza by day/movie theatre at night.

Transposing this concept onto the larger scale can increase density of activity without necessarily increasing building density, translating into reduced commuting, greater convenience, preservation of the natural environment, an increase in quality public space and richer opportunities for social interaction. The outcome is new hybrid typologies and morphologies that pool human and natural resources to the benefit of all. This approach activates places by creating thresholds, or places of intensity, where diversity thrives. By increasing density of activity, and perhaps building mass, these new typologies and morphologies weave connections between places, people and experiences.

Porosity preserves the integrity of what is brought together, while allowing mutual access through permeable membranes, in contrast to the modernist attempt to dismantle boundaries or postmodernist fortification. *Authenticity* involves actively engaging and drawing inspiration from actual social and physical conditions with an ethic of care, respect and honesty. Like all healthy organisms, the 'authenti-City' is always growing and evolving according to new needs that arise, thanks to a self-adjusting feedback loop that measures and monitors success and failure. Finally, *vulnerability* calls upon us to relinquish control, listen deeply, value process as well as product and re-integrate space with time. These five qualities offer a harbour or point of departure, like the basic chord structure in jazz from which musicians improvise, or any set of technical skills

(artistic, technological, business, sports, culinary, etc.), essential for generating something of value.

Practicing Integral Urbanism

In the same way integral urbanism recognizes exemplary practices from which to learn and upon which to build, the first step in applying it involves identifying what a community values and assuring its preservation. Just as a good manager builds on existing strengths of an organization, so good urbanism builds upon given assets of a place. Hence, integral urbanism begins by engaging communities to identify such assets and consider how best to leverage them. These may be buildings, neighbourhoods, businesses, cultural institutions, natural landscapes or creative and intellectual capital.

This approach departs from the modern ethos that privileges a clean slate (*tabula rasa*), erasing historical, cultural and environmental contexts and far too often, introducing new interventions at the expense of what was valued. It also tends to veer away from master planning which, in its focus on controlling everything, ironically tends to generate fragmented cities without soul or character. Instead, practices that demonstrate and inform integral urbanism typically engage in place-specific punctual interventions with a tentacular or domino effect, catalyzing other interventions in an ongoing dynamic process.

Beginning with what is valued, rather than what is not ('problems' or 'deficits'), this approach sets a generative and dynamic self-adjusting feedback mechanism into motion, where communities build creatively upon their strengths, in the process often converting their greatest problems into their greatest solutions. Recognizing these assets and capacities inflects the process, invariably leading to a consideration of what would be of greater value with minor adjustments. After identifying and protecting what is valued and enhancing what may be under-performing, integral urbanism addresses what may be missing and should be added. Rather than neglect, abandon or erase our urban heritage, integral urbanism preserves buildings, neighbourhoods and natural landscapes that are valued; rehabilitates, reclaims, restores or renovates what is under-performing; and then adds new elements, all informed by effective community involvement.

The integral urbanism approach thereby determines where there is energy in the larger system, both physical and social, and where it is lacking. It can thus perform 'urban acupuncture', skillfully inserting interventions into the urban organism that clear blockages along 'urban meridians', liberating energy to fuel additional positive growth and change (Frampton, 1999; De Solà-Morales, 2004; Lerner, 2005; Ellin, 2006). When this process is applied, transformations are inspired by the inherent qualities of a place, its 'DNA', allowing for unique and meaningful expressions to unfold (Ellin, 2010).

Canalscape for Metro Phoenix

That flowing imagination which founded the city in the first place can be re-found. It is planted in our midst always ready to flower—if we begin, not with the 'problem' of what needs to be changed, or moved, or built, or demolished, but begin with what already is here, still stands and sings of its soul, still holds the sparks of the mind that initiated it ... (Hillman, 2003, p. 18)

In the Phoenix region, there is an initiative for practising integral urbanism with ‘canalscape’. This aims to build a distributed system of vital urban hubs where canals meet major streets throughout the metropolitan area (population 4 million, land mass over 9000 square miles). Initially constructed two millennia ago by Native Americans with stone hoes to support life in this arid region, the canals were abandoned when this civilization mysteriously disappeared over five centuries ago. As the area was re-inhabited by Anglos in the late nineteenth century, modern canals were constructed from 1868–1913. Today, the Phoenix region is criss-crossed by 181 canal miles, more than Amsterdam and Venice together (Figure 1). This water delivery system is owned by the federal government’s Bureau of Reclamation and maintained by the Salt River Project (SRP), a local utility.

During the ancient period, small villages were located along the canals featuring platform mounds several storeys tall, small houses, gardens and ball fields (Figure 2). During the modern period, houses typically faced canals and people picnicked along their banks and swam, even water-skied, in the canals. In the 1960s, suburban tract housing turned its back to the canals (Figure 3) and the large shade trees lining the banks were removed in misguided efforts to save water. From a neighbourhood amenity and important point of pride and distinction for the region, the canals became a recreational path at best and, at worst, ‘back alleys’ for dumping and illicit activities. During a 6-mile canal walk, a group of students spied 53 shopping carts, several mattresses, syringes and other sordid items. Certainly not a point of pride!

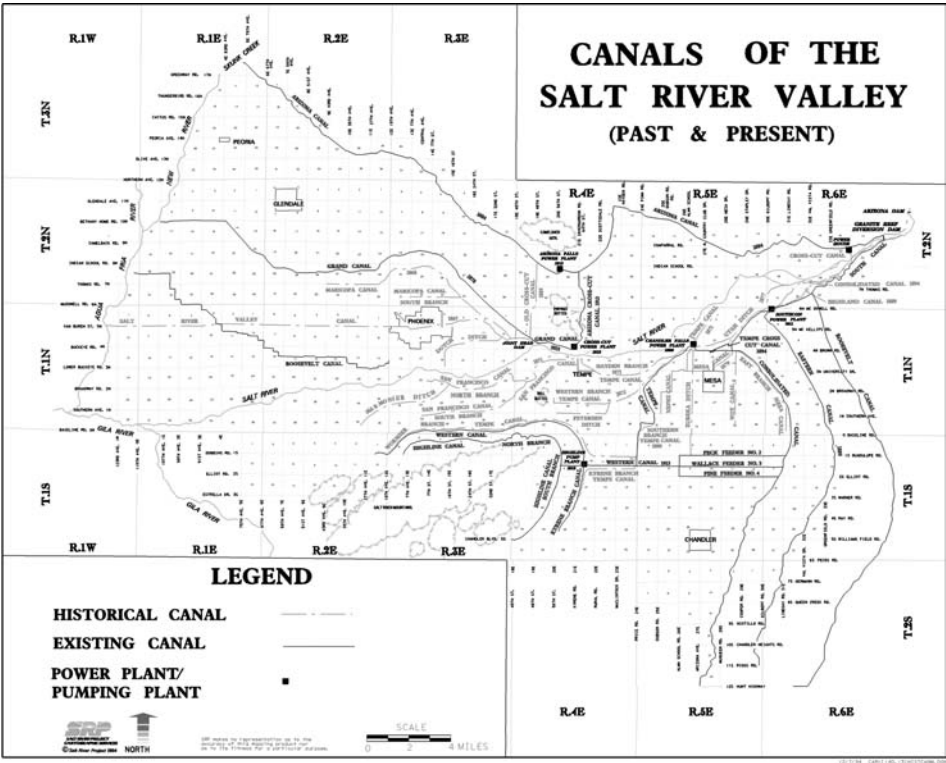


Figure 1. Past and present canal systems (SRP).



Figure 2. Pueblo Grande, Native American settlement along canal, 700–1400 CE. *Source:* painting by Michael Hampshire.



Figure 3. Suburban tract developments turned their backs to the canals. *Source:* photo credit: Ellin.

A column that appeared in the local newspaper in March 2008 (Ellin, 2008) proposed that this historical infrastructure should be celebrated and leveraged by facing the canals once again, particularly where they meet major streets. Instead of neglecting the resultant irregularly-shaped parcels that depart from the repetitive grid, the current state of affairs, it was suggested the region's unique quality of interspersing urban living should be built upon into the magnificent desert landscape. This mixed-use 'urban infill' would offer an alternative to sprawl, highly desirable live/work/play settings and much-needed places to gather. For the thousands who use the canal banks daily for recreation, there would finally be a place to stop for something to drink, a bite to eat or to use the restrooms.

Canalscape, the column maintained, would contribute to provide a sense of place, history, identity and community. Orientation toward the canals would bring people in contact with them more regularly, cultivating respect for local heritage as well as the precious water supply, ultimately the most effective way to nurture stewardship. While providing desired amenities to neighbourhoods, the Phoenix metropolitan region would become known worldwide for its unique network of vibrant urban hubs along canals. Canalscape would also stimulate the currently sluggish economy, contributing significantly to urban and economic revitalization. It would ultimately transform the 'problem' of unsafe and unsavory canal banks into a solution for enhancing quality of life and quality of place in the Phoenix region.

There are over 150 opportunities for creating these vital urban hubs (Figure 4). Adhering to the live theory of integral urbanism, neighbours would gather to determine the size and character of nearby sites in workshops facilitated by municipalities. One canalscape might feature cafes, restaurants and boutiques on the ground level with offices and condos above. Another neighbourhood might opt for a community centre, library, post office, affordable housing and apartments. Yet another could envision a grocery, health club, bike shop and school, together with Assisted Living for seniors. A canalscape might blend with its surroundings or stand out. It could include public art by local school children or established artists. It could demonstrate green building practices, including alternative energy generation for local use, urban gardens and more. This engagement with local communities is essential to achieving the placemaking and community-building benefits of canalscape.

This author convened an Advisory Board in Fall 2008, comprising 22 representatives from the university and the community to obtain periodic feedback and

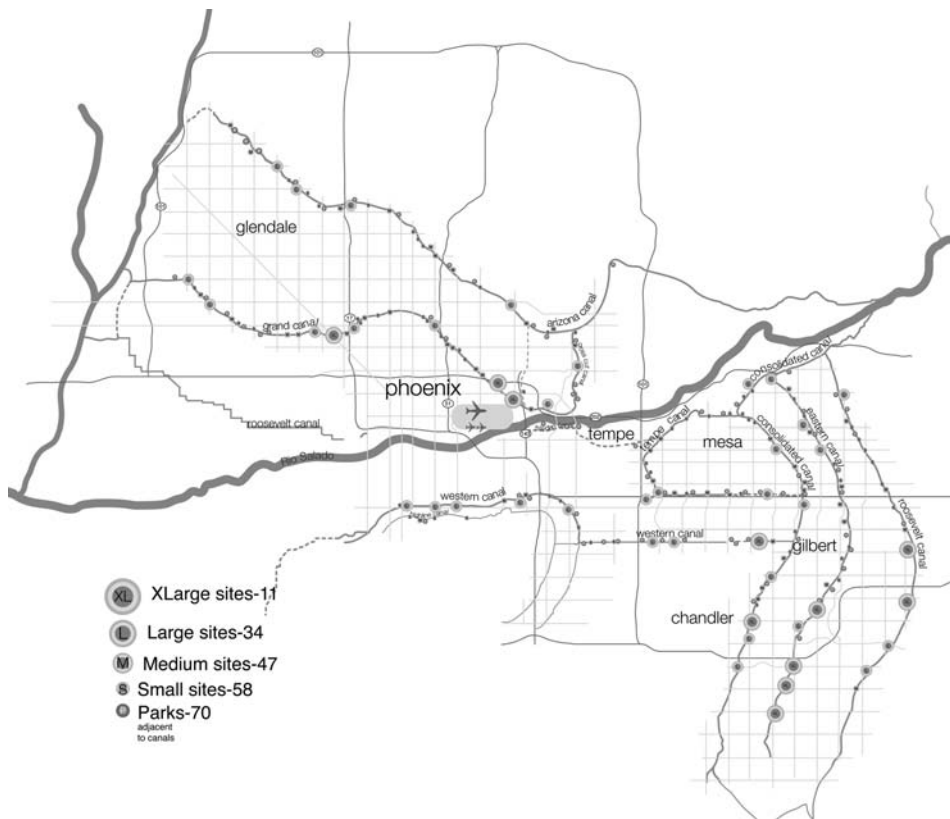


Figure 4. There are over 150 potential sites for canalscape in Metro Phoenix. *Source:* graphic by Francisco Cardona.

offer general recommendations on realizing the vision of canalscape. In Spring 2009, a Canalscape Workshop took place at ASU with 22 students from 10 different programmes including Planning, Sustainability, Geography, Real Estate Development, Design, Public Policy, Public Administration, City Management, Journalism and Urban & Metropolitan Studies. This was partnered with an Urban Design Studio at the University of Colorado-Denver taught by Lori Catalano with 15 students from Architecture, Landscape Architecture, and Planning.

The semester began with a symposium at ASU gathering experts in water policy, land use, real estate, canal history, hydrology and environmental engineering. In addition, artists and designers presented public art works along the canals as well as visions for art and urban design along the canals. The ASU and UCD students also spent hours walking the canals, visiting four sites selected for their diverse conditions: a small neighbourhood site, a medium commercial/neighbourhood site, a large commercial site and a huge site abutting both the airport and an ancient Native American settlement and museum, with potential to become an important gateway into and out of the city.

The students developed a website (www.canalscape.org), researched the history of the canals as well as visions for the canals, gathered case studies of canal urbanism around the world, and advanced design and policy proposals for implementing canalscape. Several students focused on guidelines for Canal-Oriented Development (COD)¹ and one developed a Canal Module for



Figure 5. Proposal by Dan Bartman, ASU student.

the Smart Code that is in the process of being adopted.² Two students from the School of Sustainability formulated Canalscape Sustainability Standards.³ Another group engaged the community through surveys, interviews and focus groups to determine perceptions and preferences for the canals and also developed a half-day community workshop curriculum for municipalities to facilitate. A PhD student in Sustainability worked with a group of 4th–8th graders, whose school abuts a canal, to imagine canalscape there and build a room-size model.⁴ Four students produced short videos about the concept (<http://canalscape.org/video/>) that have gone viral. Numerous students advanced urban design proposals for the sites (Figures 5, 6 and 7). ASU dance professor, Mary Fitzgerald, choreographed a canalscape performance to original music composed by ASU graduate student Julian Peterson. In addition, the American Institute of Architects Phoenix Metro chapter sponsored a canal design competition, challenging architects to team up with other professionals—including developers, planners, landscape architects and artists—to submit canalscape proposals for sites of their choosing (see <http://aia-phoenixmetro.org/about-us/phoenix-canal-s-professional-design-competition/>).

All of this work was presented in a canalscape exhibition that opened at the ASU Art Museum and subsequently travelled to Phoenix City Hall and Scottsdale One Civic Center, before settling in its permanent home at Gateway Community College, located on a canal within our huge site near the airport (Figure 8). Associated programming has included lectures, panel discussions and tours led by the author and her students⁵, who also wrote and produced a 48-page publication



Figure 6. Existing canal site. Source: photo credit: UCD students.



Figure 7. Proposal for this site by Julia Schnorr, Basim Al Atni and Bill Mahar, UCD students.



Figure 8. Exhibition at Gateway Community College. Source: photo credit: Ellin.

that was printed by SRP and distributed at the exhibitions and related events (posted at <http://canalscape.org/exhibit-publication/publication/>).

Canalscape has been recognized by the mayor of Phoenix as one of his 17 'Green Phoenix' initiatives (http://www.phoenix.gov/webcms/groups/internet/@inter/@citygov/@recovery/documents/web_content/031522.pdf) and by the Arizona Historical Advisory Commission as an official Arizona 2012 Centennial Legacy Project. ASU President Michael Crow featured it on his podcast (<http://president.asu.edu/node/667>) and the *Arizona Republic* printed three major editorials on the topic, the most recent of which stated:

The irony of this desert community's relationship with its only flowing water is not lost on everyone. There are people who have noticed, for instance, that of the 75 largest metropolitan regions in the US, only six are built without a significant waterway nearby. They've noticed that only one of those six communities—its hottest one—has designed its communities to pretend what little water it has isn't there. And, after more than half a century of intentionally designing neighbourhoods to be blocked off from their canal waterways, these people are acting to turn the Valley around, so to speak. They have concocted a marvelous little plan to make us all face—and, once again, take some pleasure from—the single most valuable commodity in the desert, our flowing water ... That opportunity is almost shocking, it is so obvious and elegant in its simplicity. (Maceachern, 2009)

Other print, broadcast, and electronic media have also been profiling the project (see <http://canalscape.org/press/>).

Having planted many seeds, canalscape is moving towards implementation on a number of fronts through continued work with the Canalscape Project Team including students, the Advisory Board and community members who care deeply about the project, many of whom made contact via the website. First, work is being conducted with several neighbourhood groups, at their request, to envision canalscape for select sites.⁶ In total, 21 neighbourhood groups have made contact to request assistance. Second, discussions are taking place with city planners about integrating Canal-Oriented Development into the General Plan or Specific Area Plans and streamlining the development process. Third, private developers have been encouraged to undertake urban infill and adaptive reuse on properties alongside the canal banks and work is being done to develop a 'Canal Connect' website to provide resources and tools to the private sector (site availability and prices, clarification of development process, and other information).⁷ Fourth, there has been brainstorming with urban designers, artists and arts organizations about opportunities for design and public art (visual and performing) at these locations to both draw attention to them and enhance them.

At ASU and UCD, this workshop spawned at least five subsequent canalscape studios and workshops taught by other faculty members as well as numerous independent student and faculty projects. Canalscape has resonated with the professional community as well—planners, architects, and landscape architects—who have been encouraging canal-side clients to address the canal and proactively proposing larger-scale urban design projects for their favourite canal locations.

Taking all of this work to the next level, a local organization dedicated to improving quality of life in the region, the Valley Forward Association, has 'adopted' canalscape. This group was responsible for realizing an ambitious vision for the Rio Salado, birthed at ASU in a studio led by Dean James Elmore in the 1960s–1970s and further developed by Stephen Carr and Kevin Lynch in the 1980s. Valley Forward has formed a multidisciplinary Canalscape Committee and is co-ordinating the ongoing efforts, contributing professional expertise, identifying necessary resources for implementation, and serving as watchdog and steward. Together with a consortium of interested parties, the first demonstration project is being planned on the site adjacent to Gateway Community College where the permanent canalscape exhibit is located.

Refining the Practice of Integral Urbanism: VIDA

Practising integral urbanism on home turf allowed the opportunity to test and refine it. While the tenets and approach of integral urbanism provided a reliable framework and fertile source of inspiration, it became apparent that outlining a clear process would facilitate translation from theory to practice, and so VIDA, Spanish for 'life' and acronym for Visioning, Inspiring, Demonstrating, and Advocating, was introduced (Figure 9). VIDA draws from community-building and organizational learning approaches, particularly Asset-Based Community Development (McKnight & Kretzmann, 1996), the Creative City (Landry, 2000), Theory U (Scharmer, 2007), and the work of Peter Block (2008).

Countering prevailing tendencies to cope with poor quality of places through denial, deflection or distraction (Ellin, 1997, 1999), VIDA applies two kinds of vision: the ability to see things clearly and a vision for a better future. These are acquired through *me-search*, *re-search* and *we-search*. Me-search entails listening to

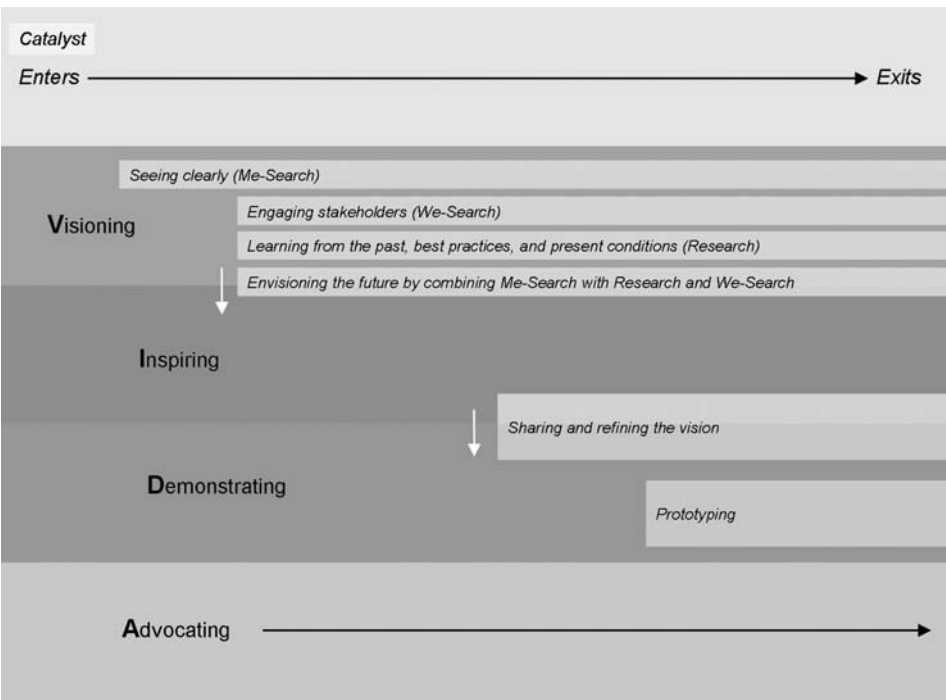


Figure 9. The VIDA process.

our own intuitions, preconceptions and biases. Re-search investigates the past, best practices elsewhere and current conditions. We-search involves listening to others and carefully observing places to build relationships, identify assets and consider how best to leverage these assets. Combining all three enables us to paint a vision of what could be while inspiring all to implement the vision through working with others to imagine and share the possibilities. Demonstration begins with painting this picture to/with others, and evolves through prototyping, turning the possibilities into realities. Advocating takes place throughout the VIDA process by communicating the vision to appropriate audiences through writing, presenting and convening public programmes. Depending on the project, demonstration and advocacy may involve public scholarship, scholarly writing, branding and/or development of a business plan including funding sources, management, impact assessments and long-term sustainability projections.

The VIDA process becomes yet another asset, along with the product of the process. As Peter Block explains, the community collaboration to support urban revitalization effects a 'collective transformation', bringing together the knowledge of many to support something new, and to maintain or transform it accordingly (Block, 2008). Thanks to this collective transformation, the successful VIDA process is catalytic, effecting significant and ongoing change, eventually without the initial stewards, who may then move on to catalyze other projects.

Learning from Canalscape

The canalscape initiative provides an opportunity for refining integral urbanism as a live theory aiming to enhance the health and well-being of cities and

communities. Canalscape also offers a case study to inform other initiatives. For these, a summary set of guidelines, together with brief descriptions of the ways canalscape has endeavored to satisfy them, may prove instructive.

- (1) Through community engagement and participant-observation, identify what is integral to a place—its DNA—and build upon these assets, rather than focusing on deficits and problems (Ellin, 2010). Canalscape: the canals are clearly part of the DNA of the Phoenix region, great assets upon which the canalscape initiative builds.
- (2) Demonstrate hybridity, connectivity, porosity, authenticity and vulnerability. Canalscape: this initiative introduces mixed-use urban infill along recreational and commuting corridors, offering a distinctive quality of life that integrates urbanity into nature and honours local history, ecology and communities.
- (3) Engage in ‘urban acupuncture’ by removing blockages in ‘urban meridians’, rather than imposing Master Plans, thereby bringing urban and economic revitalization. Canalscape: allowing regional energy to flow, distributed canalscape along the canal meridians of the Phoenix region would contribute to improve urban and community health.
- (4) Co-create (Scharmer, 2007) with VIDA because great cities are built by communities over time, a palimpsest with each new layer adding depth, interest and character. Canalscape: this initiative recognizes and builds upon all previous contributions to the canal infrastructure, from the ancient period to the most recent efforts. The project also engages local communities, municipalities, SRP, urban design professionals and other interested members of the community. Just as the early inhabitants of the Phoenix region applied their ingenuity to convert an arid land into a fertile valley, more recent inhabitants have been collaborating to produce a new layer that will support an authentic and sustainable desert urbanism.
- (5) Prototype and depart: the VIDA process regards the urbanist as a catalyst who works with other to envision, inspire, demonstrate and advocate. Once the vision is demonstrated and owned by many, the ‘chemical reaction’ has taken place and the project belongs to the community. At this point, the catalyst may exit, moving on to catalyze other projects. Canalscape: as various community groups coalesce around the first canalscape, those of us who were deeply involved in catalyzing this process feel confident the project is in good hands and are moving on to undertake others.

Notes

1. ASU and UCD students who developed the COD concept include Chris Kuzdas, David Crummey, Dan Bartman, Jeff Brown, Tyler Greenfield, Eric Knutdson and Michele L. Larimer.
2. This was Dan Bartman’s Masters thesis in Urban & Environmental Planning, ASU 2010.
3. Andrea Baty and Riley Smith.
4. Braden Kay was assisted by architecture student Audrey Maxwell.
5. We are grateful to the Arizona Humanities Council and Arizona Historical Advisory commission for a grant and award (respectively) that contributed significantly to funding these exhibits and the educational programming. Other supporters include ASU and landscape architecture firm EDAW-AECOM.
6. David Proffitt is leading this effort for his Masters of Urban & Environmental Planning thesis project, ASU.
7. ASU students Bryan St. Andrews and Rose Kane have been involved with this project.

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