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MAS CONTEXT

SPEED

ISSUE 11 FALL 11

11 | **SPEED** FALL 11

The urban conditions around us are constantly changing. With a faster or slower SPEED, the built environment is transformed as it does the way we experience and engage with it. In this issue we will be looking at the pace in which physical and social changes happen and the consequences and opportunities available.

MAS Context, a quarterly journal created by MAS Studio, addresses issues that affect the urban context. Each issue delivers a comprehensive view of a single topic through the active participation of people from different fields and different perspectives who, together, instigate the debate.

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Finding your Speed

Issue statement by **Iker Gil**, editor in chief of **MAS Context**

The way we live is continually changing — from the way we communicate, travel and learn to the way we produce, consume and govern. But the speed of those shifts, the real pace at which physical and social change happens, varies from one place to another. And so do the consequences. To begin to imagine and identify these consequences across contexts and disciplines, in this issue we explore the speed of production, consumption, transformation, implementation, growth, transfer, movement and preservation in our built environment.

We open the issue with Jeffrey T. Schnapp, curator of the exhibition *Speed Limits* produced on the occasion of the centenary of the publication of the Founding Manifesto of Futurism and presented at the Canadian Center of Architecture and the Wolfsonian-FIU. Discussing the role of speed in history, he establishes that “whereas somatic movement provided the driving force in the era of Marinetti, it is data flows that propel the chariot of contemporary civilization.”

Later in the issue, Troy Conrad Therrien also writes about the speed of information (a topic also covered in Issue 7, Information). As he points out, “the passage of time can be said to be measurable through the constant information stream of updates we parse, edit and, increasingly less so, process.”

Through the visualization of the data from the Council on Tall Buildings and Urban Habitat, André Corrêa and I investigate the increase in speed in the construction of buildings over 150 meters in the last decade and provide a snapshot of their current global location.

At an urban scale, we focus on the stories of three cities and the challenges they face as they continue to grow and transform. We talk to Camilla Nielsson, co-director of “Mumbai Disconnected”, a documentary exploring the precarious infrastructure of one of the world's biggest megacities through three human stories. Architects José María Ezquiaga and Juan Herreros present the project “Proyecto Madrid Centro”, a strategic plan that identifies the possible solutions to address, in a sustainable way, the challenges that Madrid is facing.

Finally, we look through a series of diagrams at the spectacular transformation experienced by Bilbao in the last three decades. Always excited and proud to share the story of the city in which I grew up, it is time to put in context why and how this transformation happened in such a short period of time. It is time to understand that the so-called “Bilbao effect” is the result of much more than the success of a museum.

Some interventions at the urban scale require long-time planning and big economic resources. And some don't. Candy Chang shows us how low-tech public installations, quickly implementable, can be a fantastic community activator and a successful tool to make us think about the potential of the public spaces that surround us.

In the work of photographer Michael Chrisman and architect Antón García-Abril, we find that the desired result is achieved through a slower speed. Michael Chrisman produces 1000-hour long exposures, something that makes him explore the limits of the medium. In his interview with Andrew Clark, he discusses the process and aspirations of this very slow experiment. Antón García-Abril, principal of the architecture office Ensamble Studio, presents *The Truffle*, a project in which nature, as well as the calf Paulina, determines the pace and result of the project.

If *The Truffle* uses the cow, Farmland World reinvents the nature of farming itself. In this project, Design With Company uses speed as a catalyst for reconfiguring the relationship between the city, the rural landscape and the animal/machine hybrids that cultivate land. Part theme park and part working farm, a new typology is born.

In his essay, writer and urbanist Brendan Crain writes about the role of new digital tools in preservation efforts. In the existing conflict between preserving buildings to slow the process of loss and the dynamic nature of people, digital layers can maintain a sense of urgency around long-passed events that lend the built environment much of its import.

And what would be speed without cars and the culture of cars? Stephen Killion combines the speed of an incredibly intense annual urban transformation with the impact of the Indy 500 in his series of diagrams about Speedway, Indiana. And photographer Andrew Bush documents individuals driving cars in and around Los Angeles, probably the city most identified with car culture, suggesting different speeds and personal spaces.

With urgency or not, enjoy this issue at your own speed.

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Notes From the Velodrome

Essay by **Jeffrey T. Schnapp**, Professor of Romance Languages & Literatures at Harvard and faculty at the GSD



Exhibition Speed Limits, 2009
View of the installation at the CCA.
© CCA, Montréal

8:42:36 :: 24/8/2011

Generally speaking, I'm a fast writer.

(But not always.)

For thirteen years now I have been grinding away on a book in progress entitled *Quickening -- An Anthropology of Speed*.

To qualify an endeavor that has been underway for over a decade as a book *in progress* may do undue violence to the notion of a "book" – the tome long ago assumed bloated proportions – and "progress." All the more so in the case of a volume dedicated to the theme of speed. Yet the project's scope and tentacular ambitions have dictated a pace better suited to Rousseau's solitary *promeneur* than to the speedsters, human or mechanical, that drive 20th century tales of conquest and adventure.

8:59:08 :: 24/8/2011

4 email messages in; 3 out

9:04:29 :: 24/8/2011

Slow or fast, *Quickening* dubs itself an "anthropology" in order to stake out a slightly different claim from that of now-classic accounts of modernity as the era of speed, like Stephen Kern's *The Culture of Time and Space* and Wolfgang Schivelbusch's *The Train Journey* (both of which I admire), as well as from the present-centered teleologies of theorists like Paul Virilio (which I admire less). Unlike these and other authors, I find it more compelling to argue against the reduction of the history of speed to that of the modern era. My heuristic assumption, on the contrary, is that the enduring dromological imagination that is the object of analysis of *Quickening* becomes intelligible only when one applies critical pressure to modernity's own self-understanding as a rupture event.

9:35:42 :: 24/8/2011

The embrace of a capacious "anthropological" framework in no way implies a flattening out of historical differences. For, in my view, the post-industrial era presents distinctive attributes as an era of speed with respect to the era of industry. Never, as in the present, has speed invaded more nooks and crannies of our everyday existences:

from the tick of the human psyche to the tocks of culture, economy and language. Never before has this once-exclusive attribute of gods and god-like men, become the common patrimony of so many men and women on a worldwide stage. And never in prior epochs have so many voices risen up to sound the clarion call of a salvific slowness, however fatally enmeshed that slowness might be in the very logic of acceleration as progress (like "smart" control systems that increase the pace of urban traffic flows; or safety devices that make taking on ever greater physical risks a reasonable behavior; or investment vehicles that provide "insurance" against speculative risks while creating new speculative opportunities of their own). All are tell-tale symptoms of an epoch in which speed is king but in which the monarch's clothes are no longer those worn at the turn of the 20th century.

10:13:11 :: 24/8/2011

phone call from Switzerland; 9 email messages in, 4 out, 2 forwards; 1 text message received, one reply

10:47:02 :: 24/8/2011

The paradoxical consequences of this democratization of speed and of its reshaping of the life world of ordinary individuals provided the initial impetus for *Speed Limits*, the exhibition that, I curated for the Canadian Center of Architecture (May-October 2009) and the Wolfsonian-FIU (September 2010–March 2011) on the occasion of the centenary of the publication of the *Founding Manifesto of Futurism*. The show was flanked by a companion volume bearing the same title, published in Milan by Skira, divided into Speed Writings (ten commissioned essays), Rush City (a visual essay), and Speed Readings (a historical anthology of writings from Gérard de Nerval to Shin'ichi Tsuji).

Speed Limits was a stop on the road to completion of *Quickening*. Both exhibition and book sought to explore the legacies of a heroic narrative of acceleration that predates the foundation of Futurism, but that Futurism amplified. The narrative in question famously equates speed with modernity. It is a myth both of transformation (of human possibilities, of nature, of man through machine) and emancipation (from the past, from a fixed relation to place, from the law, from community bonds, even from death). It insists not only that speed infuse all modern forms of rationality, social organization, and aesthetic experience, but also that it serve as the basis for measuring individuality,



All images:
Exhibition Speed
Limits, 2009
View of the
installation at the
CCA.
© CCA, Montréal



priority, property, productivity, progress, profit, intelligence, accomplishment, value, and pleasure (even as speed engenders distinctly modern forms of exhaustion, distraction, delay, jams in the system, crashes and collisions).

11:24:58 :: 24/8/2011

coffee; brief flurry of messaging activity (2 out, 4 in, 2 blind copies forwarded)

11:31:00 :: 24/8/2011

In significant respects, this heroic narrative now belongs to the past. A split occurred some decades back, with many (if not most) forms of advanced or experimental culture contesting or casting an ironic light on the modern cult of pace, even as the rhythm of social and economic life – in particular *mental* life – continued to accelerate. And this process of acceleration has continued to such a degree that a secondary bifurcation has now accompanied the first, this time between somatic and mental mobility, between flows of bodies and data and media streams.

It is well-known that the democratization of physical mobility, capped by the global reach of mass tourism and the regional dissemination of low-cost airlines, has produced plateaus in the rates of travel along most transportation routes. Today's pace is generally equal to or inferior to that of two decades ago, whether on land, in the air or on the seas. This impasse has arisen precisely as the speed of communications networks undergoes explosive growth. The result is a mutation within the heroic narrative. Bodily and mental expressions of velocity have always been the flip sides of a single coin; but whereas somatic movement provided the driving force in the era of Marinetti, it is data flows that propel the chariot of contemporary civilization.

12:46:44 :: 24/8/2011

lunch break, 3 local phone calls followed by renewed messaging flurry (5 emails out, 12 in)

14:07:28 :: 24/8/2011

How to translate this paradoxical logic into the language of an installation design? The task was confronted with the inspired help of Michael Maltzan (in Montreal) and René Gonzalez (in Miami).

The first goal was to move away from an artifact-centered approach and, instead, to lay out an *argument* through the spatial syntax of the installation itself and through the staging of objects as arrays. The objects in question were distinctly heterogeneous. Some were reproductions. Some were drawings by the masters of 20th century architecture. Others were pharmaceutical products and beverages available at the corner store. There were also books, pamphlets, photographs, household appliances, and a multitude of media materials from television advertisements (a 1982 FedEx commercial with the world's fastest talking actor, John Moschitta Jr.) to video game captures (from Microsoft's *Project Gotham Racing*). Yet each of these objects had to tell a story bigger than their own.

The second aim was to create a fluid, unstable sense of space. In Montreal, the object arrays were framed in cases that veered off the walls at oblique angles, bending this way and that. Dummy walls, screens, and angular benches intruded diagonally into the rectangular plan of the galleries, giving rise to narrowed passages, sites of accelerated or impeded passage, possible sources of a human Venturi effect. A suspended spiral housing eight large-format monitors filled the Circulation room, with breakneck speed runs through eight major capitals on the inside and histories of accident and the scientific analysis of traffic systems on the outside. In Miami, rhythmic striping and reflective surfaces were used to create a sense of spatial syncopation and shifting boundaries between display structures and their reflected images, between volumes and voids. Vertical plexi sandwiches were suspended between the ceiling and floor to shape film-like sequences, so that traversing the galleries would feel like the spooling or unspooling of a film reel and a time-based performance.

The third aim was to embed different, even contradictory paces of viewing into the very design of *Speed Limits*. Quotations from the Speed Reader banded the cornice of the galleries of the CCA, legible only as or if the visitor circled the room. Object labels were telegraphic and sometimes little more than a number referencing a small panel that was dislocated with respect to the objects. A printed gallery guide with in-depth object-by-object descriptions was placed at key junctures, allowing for a cognitively slow and attentive experience of individual objects otherwise staged for rapid visual processing.

17:30:55 24/8/2011

3 text messages; quick phone call; 8 emails in, one urgent; 5 out; 2 forwards

17:47:01 24/8/2011

For *Speed Limits*, the question of humanity's ability to adapt to and sustain multiple paces of cognitive processing was at once a design challenge and a historical question that the show and book sought to historicize and re-pose. The matter has given rise to recurrent panics over the course of the modern era: panics about too much memory (Nietzsche), too little memory (Santayana), neural exhaustion (fin de siècle psychology), the "epidemic" of ADHD, and the like. It continues to inform contemporary debates over the powers and limits of mental multitasking versus contemplative models of reasoning, of thinking as blinking versus thinking as distraction-free rumination. Such debates come with the very turf of modernity and contemporaneity, have a venerable tradition, and are sure to go on unresolved. In the meantime, the clock is ticking and I have a book to write (but perhaps that's what I have been doing by composing these notes).

19:02:00 24/8/2011

Mumbai Disconnected

Iker Gil interviews **Camilla Nielsson**, co-director with **Frederik Jacobi** of the documentary **Mumbai Disconnected**

Like a city on steroids, Mumbai is rapidly becoming one of the world's biggest megacities. But it's all happening on a narrow peninsula with an infrastructure on the verge of complete collapse. Every day, 10-12 people die from falling off the overcrowded public trains. On the roads, cars come to a stand-still in serial traffic jams. To make matters worse, the Nano, India's popular and affordable mini car, was launched in 2008. Iker Gil interviews Camilla Nielsson, co-director with Frederik Jacobi of the documentary "Mumbai Disconnected." Through three interwoven human stories, we meet the people at the frontline of Mumbai's infrastructural battle. The film is part of Cities on Speed, a documentary project commissioned by The Danish Film Institute and the national broadcaster DR that presents four filmic views of human conditions in four of the world's biggest cities: Bogotá, Cairo, Shanghai and Mumbai.

Mumbai Bridge disconnected
Photo by Frederik Jacobi © Upfront Films

IG: How did you and co-director Frederik Jacobi decide to do “Mumbai Disconnected,” and how did you become involved in Cities on Speed, a project commissioned by the Danish Film Institute and the national broadcaster DR?

CN: I was working on another film project in a production company in Copenhagen, and one of the producers who knew that I had spent a lot of time in Mumbai proposed that I write up an idea for the series Cities on Speed. Frederik Jacobi joined the project first as a DP, and later as a co-director. We had never worked together before, but we clicked really fast, and I felt that we could make a better film if we took a collective responsibility for the storytelling, as well as the cinematography.

IG: Previous to “Mumbai Disconnected,” you had directed a trilogy on children’s rights: “Good Morning Afghanistan” (2003), “Durga” (2004) and “The Children of Darfur” (2006). What attracted you to looking at urban issues and, more specifically, to rapidly changing cities like Mumbai?

CN: I've always liked big cities, and films about life in big cities. I lived in New York for 6 years and I was always very fascinated by how well designed the city is. The grid street system and the subway means that more than 8 million people are able to move around relatively freely on an island as small as Manhattan. Arriving in Mumbai, on the other hand, you are overwhelmed by the traffic and the chaos in the streets, and although more people live on much less space there than in Manhattan, it made me think of whether there still was a way for Mumbai to plan its way out of a collapsing infrastructure, or whether its future is really as dystopian as some urban planners and architects are predicting.

IG: How was the process of starting to look into the issues of Mumbai?

CN: As a megacity, Mumbai is facing many types of problems related to its rapid growth. It is an extreme city on every level, and there are many great and relevant stories to be told from there. As a filmmaker and anthropologist, I'm interested in people and human stories more than theoretical questions about urban planning and infra-

structure. So I started thinking about how it affects people's daily lives living in a place where getting on a train in rush hour is a bigger accomplishment than most of us can imagine. I also knew that I didn't want there to be any villains. I didn't want the film to point the blame for the city's problems in any particular direction. Instead, I was looking for a multi-POV approach and a structure that could unpack some of the inherent complexities that make up the big city maze.

IG: The film looks at the transportation infrastructure of Mumbai through the lenses of three different characters. Talk to us a little bit about the selection of the three characters in the documentary and what you discovered from each one of them.

CN: When researching for the film, I was looking for frontlines in the public debate about Mumbai. Where were the major clashes and what were the competing interests between which groups of inhabitants in the megacity? I learned a lot by reading local people's blogs on the internet. Traffic problems in the city seemed to be a common theme of debate here more than I have seen anywhere else. It was all about traffic. I was looking for a microcosm that could unravel a larger story about the city, and I found the story about an elderly woman, Veena, who was living in a wealthy neighborhood on Peddar Road. She had been leading an 8-year battle against the building of a four-lane flyover outside her apartment. The public debate about whether to build the flyover was intense and raised some interesting questions, because it affected so many people who were stuck on Peddar Road every day while commuting from their homes in the northern suburbs to work in the business district in the south. Should they suffer in hour-long traffic jams to save the neighborhood of a small wealthy elite? On the other hand, no one thinks that building more flyovers is the solution to anything, and unlike the people in the poorer neighborhoods in Mumbai, Veena had the resources and skills to go up against the massive flyover project. The conflict was therefore about much more than infrastructure. It was also about issues of class and democracy. In the newspapers and on blogs, Veena and her Residents Association were fighting both popular opinion and the Maharashtra Road Development Corporation (MSRDC), the government department in charge of constructing 60 new flyovers in Mumbai. In MSRDC we found our second charac-



Mrs. Veena
Photo by Camilla
Nielsson © Upfront
Films



Mr. Yasin
Photo by Frederik
Jacobi © Upfront
Films



Mr. Das
Photo by Camilla
Nielsson © Upfront
Films

ter, Mr. Das, a hard-working bureaucrat in charge of building the flyover. He is also a hardcore believer in meditation as a way to deal with the stress of the city's collapsing road system. We could easily have made the film entirely around their conflict alone, but Veena, who was born and raised in Mumbai and remembered the times when she could swim in the sea and the parrots were flying around freely, not living in cages, had this nostalgic memory of the city that always led her to talk about the massive immigration problem, about all the millions of people who were moving to Mumbai from the rural areas in search of a better life. From this, it became clear that the perspective of an immigrant could add to the story, dial the kaleidoscope another round and give us yet another perspective on the city. Shortly after we decided to look for an immigrant story, the Indian car manufacturer, Tata Motors, launched the Nano, the world's cheapest car, and this was the clue to find our third character. We found Yasin, who lived in the northern suburbs and commuted to the south of the city every day on the overcrowded trains. He desperately wanted the new Nano car to improve his quality of life. He also represents the people, who would like the flyover to be built. Like three archetypes representing the three sides of the Gordian knot, we seemed to have our story.

IG: Born in Denmark and having studied in the US, do you think that having an outsider's view of Mumbai and urban planning helped you to have a fresh take on the infrastructure issue?

CN: I guess so, but I think that it is also due to the anthropological gaze that I helped give the film. Anthropologists are very aware of our status as outsiders, and at the same time we are working really hard to get inside the cultural universe that we are trying to describe. The awareness of this duality is one thing that the methodology of anthropology can add to making documentary films. Also, an awareness of how we represent and affect the environment that we work in are classic anthropological trademarks that translated into the question, what right I have to tell their story, and whether it should rather have been the Mumbaikers themselves who told their own stories about their city. That would have made a different film, of course, but this question was always there. Thankfully, we have been told many times by locals who have seen the film that we have captured their



Mumbai Trains
Photo by Frederik Jacobi © Uprfront Films

city as they know it, and that the film is 'very, very Mumbai,' something that makes me happy to hear.

IG: The documentary is a powerful tool to discuss the consequences of the fast pace of current urban transformations. Like the characters in the film, the potential audience of the film could also be varied, from academics to urban designers, government officials to residents interested in the future of their city. Did you have any target audience in mind when filming “Mumbai Disconnected”?

CN: The film was originally commissioned for Danish primetime TV, and soon after other national broadcasters in Scandinavia, the Sundance Channel in the US, and in Japan NHK came along, so we knew that we were going to address a broad span of people almost from the beginning. Besides the large international TV audience, the film has also screened to full houses in festivals all around the world, which I guess is rare for a rather dry subject like this. But that was our intention. We tried to make infrastructure in Mumbai as relevant and interesting to as many people as possible, rather than taking a more technocratic approach to the subject. Making a film with academics and urban planners in mind would not have interested me in any way.

IG: According to the diagram “The Speed of Urban Change,” published in the book *The Endless City* (Phaidon, 2008), by 2015, Mumbai will add 42 people per hour, only surpassed by Lagos (58) and Dhaka (50) and tied with Karachi. At that speed of growth, what do you think might be other pressing urban problems that the city is going to need to face?

CN: There are many. Besides the problems with infrastructure, there are also more basic issues such as constant shortage of water and electricity, and space in general. In Mumbai there is an almost surreal sense of over-crowdedness. People sleep in the middle of the heavy traffic on those narrow concrete dividers that split the car lanes. A full elevator arrives and you think that there is no space, and you better wait for the next one, but the people inside say 'come on in.' And on each floor you stop and again more people manage to squeeze in. Your senses are constantly challenged. But most importantly, the steep differences between the rich and the poor needs to

be dealt with. I always wondered why the lower classes in Mumbai don't rise and protest against the almost perverse level of social injustice. The rich don't pay enough taxes there, I think, and a better redistribution of the massive wealth that is generated in the city is needed.

IG: Has there been any outcome from the film in Mumbai that has made the authorities and residents look at this issue from a new perspective?

CN: No, not in any manifest manner that I know of, but Veena wrote me recently with the news that the Peddar Road Residents Association has won their 'epic battle' against the government, which has now decided not to build the flyover in their neighborhood. Instead it was decided to continue the 8-lane sealink all the way down to the financial district in the south, and not lead the traffic back onto land through Peddar Road. It was a very expensive solution, but one that made much more sense for both the residents and the commuters.

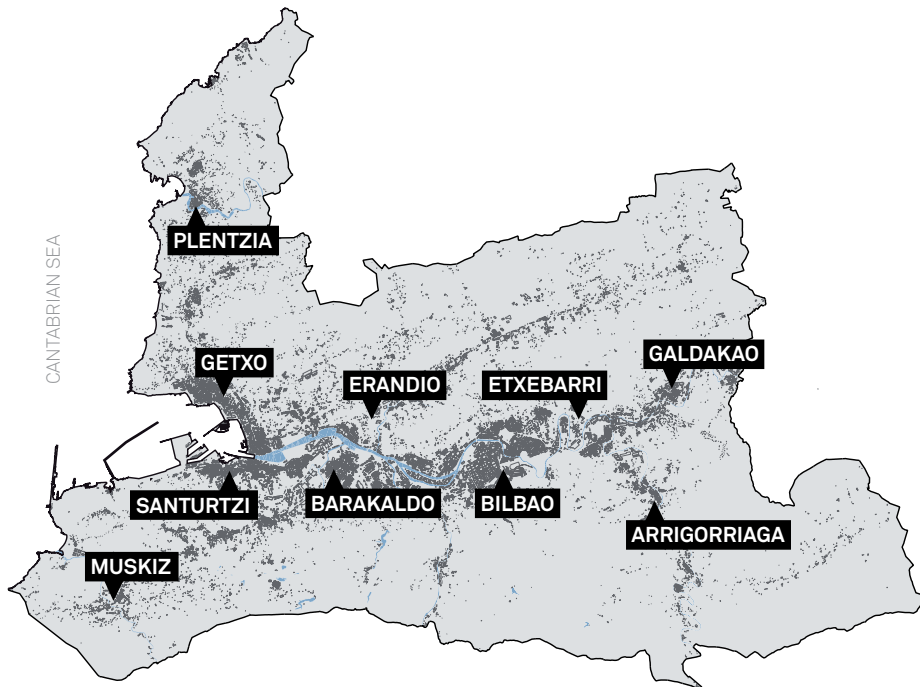
IG: Do you think documentaries like “Mumbai Disconnected” can help other cities understand the issues generated by their speed of growth and address them early on?

CN: My hope is that, if anything, the film has made us, who live in more controllable environments, more humble in terms of understanding just how hard it is to deal with the extreme challenges that megacities like Mumbai are facing. I wouldn't like the film to be seen as any kind of a lifted finger, but I think that it can make a good case study for other rapidly growing cities, and hopefully the lesson to learn from it would be to invest more in public transportation and less in short-term band-aid fixes like flyovers, which are not sustainable solutions. The film has been screened widely in educational institutions, mostly to students in the field of architecture and urban planning, and the feedback from them, who will one day be in charge of planning our future cities, has been that the film has helped them put a human face of the issues they are dealing with. I think that they are already acutely aware of the benefits of a proactive approach to urban planning. The big question is whether the politicians are prepared to invest in long-term solutions that may not pay off in their time in office.

More Than A Museum

Research and diagrams by **Iker Gil**

Bilbao has reinvented itself in less than three decades, from an industrial city in decay to an international cultural reference. While the Guggenheim Bilbao Museum became the face of this transformation, the scope, scale and ambition of this ongoing change goes well beyond the building.



Metropolitan area developed along the banks of the river

Article sources: www.bilbao.net; www.bilbaointernational.com; "Bilbao - la transformación" (Arketypo, 2006); "Bilbao - La cultura como proyecto de ciudad", Projeit Urbain 23, September 2001 (Direction Générale de l'Urbanisme de l'Habitat et de la Construction, 2001); "Bilbao's strategic evolution. From the industrial to the post-industrial city" presentation by Ibon Areso

THE DEVELOPMENT OF THE CITY

1300	DIEGO LÓPEZ V OF HARO, LORD OF BISCAY, FOUNDS BILBAO
1511	THE CONSULATE OF BILBAO WAS GRANTED TO THE CITY BY THE SPANISH CROWN
1602	BILBAO BECOMES THE CAPITAL OF BISCAY, TITLE PREVIOUSLY HELD BY BERMEO
1857	THE SPANISH BOARD OF TRADE SPONSORS THE CREATION OF BANCO DE BILBAO
1876	ENSANCHE PLAN BY SEVERINO ACHÚCARRO, PABLO ALZOLA AND ERNESTO HOFFMEYER
1886	THE UNIVERSITY OF DEUSTO IS FOUNDED. IT IS THE FIRST UNIVERSITY IN THE BASQUE COUNTRY
1890	THE STOCK EXCHANGE IS FOUNDED. THE FIRST TRADING OPERATION WILL HAPPEN A YEAR LATER
1902	ALTOS HORNOS DE VIZCAYA IS FORMED AFTER MERGING THREE IRON AND STEEL BUSINESSES
1904	FEDERICO UGALDE WINS THE COMPETITION FOR THE EXTENSION OF THE ENSANCHE
1948	THE FIRST COMMERCIAL FLIGHT TAKES OFF FROM THE AIRPORT LOCATED IN SONDIKA
1975	THE GLOBAL INDUSTRIAL CRISIS STARTS DIRECTLY AFFECTING BILBAO
1983	BILBAO SUFFERS THE WORST FLOODING IN ITS HISTORY

EFFECTS OF THE INDUSTRIAL CRISIS ON THE CITY

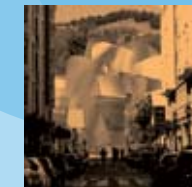
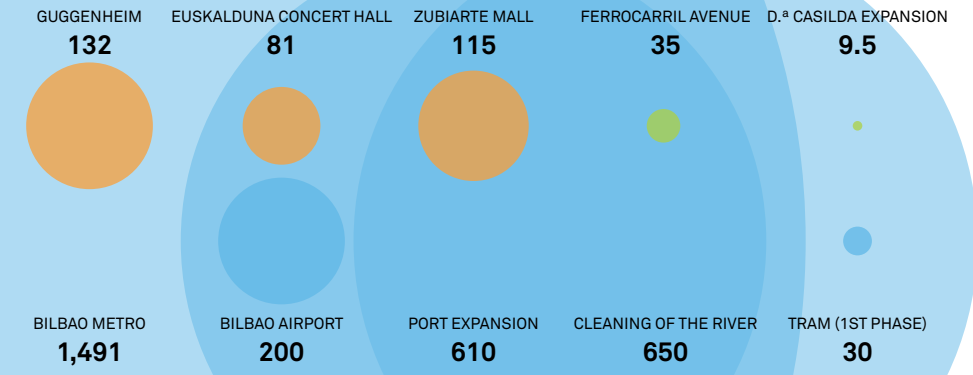
1. **Decay** of an industrial system
2. High **unemployment** (about 30%, reaching 35% in certain areas)
3. **Degradation** of the environment and the general city framework
4. **Emigration** and stagnation of population
5. Social **exclusion**

FOUR MAIN CONCEPTUAL AXES FOR THE NEW METROPOLITAN BILBAO

1. External accessibility and internal mobility for the metropolis
2. Environmental and urban regeneration
3. Investment in human resources and technological transformation
4. Cultural centrality

The critical situation of Bilbao during the 1980s required a determined and comprehensive approach to the issues that the metropolitan area was facing. The urban proposal for Bilbao is above all an infrastructure project, with the recovery of the river banks and freeing them from the industrial uses as the main element. In 1985, the port started to plan its strategy for growth within the framework of urban regeneration of the metropolitan area. Work on the Norman Foster-designed subway started in 1988 and, in 1995, it became the first project of the new Bilbao. It still is the most appreciated project by the citizens of Bilbao. The Guggenheim Museum started construction in 1993 and initially faced strong opposition, predominantly due to the public investment in culture instead of industry and unemployment, and the investment in foreign culture instead of local culture. The total cost of the museum, 132.22 million euros, was recovered by the public institutions who paid for it in four years. And that doesn't take into account the profit from the amount of articles and news about Bilbao published internationally since the opening of the museum or the improvement in the perception of the city by its residents. Fourteen years after the opening of the museum, the city and other towns of the metropolitan area continue this incredible transformation.

COST OF PROJECTS IN MILLIONS OF EUROS



GUGGENHEIM BILBAO



GALINDO MASTER PLAN



EUSKALDUNA BRIDGE



ABANDOIBARRA FINAL



DAYCARE IN SONDIKA



BILBAO METRO



BILBAO BUS TERMINAL



ZUBI-ZURI BRIDGE



PORT (1ST PHASE)



EUSKALDUNA CONCERT HALL

- URBAN PROPOSAL
- OPEN SPACE
- ARCHITECTURE
- INFRASTRUCTURE



ABANDOIBARRA



ABANDOIBARRA REVISED



1990
BILBAO METROPOLI-30 IS FORMED TO CARRY OUT PLANNING, RESEARCH AND PROMOTION PROJECTS TO REVITALIZE THE METROPOLITAN AREA OF BILBAO

1991
FRANK O. GEHRY AND ASSOCIATES WINS THE COMPETITION TO DESIGN THE GUGGENHEIM BILBAO MUSEUM

1992
BILBAO RÍA 2000 IS CREATED WITH THE INTENTION OF RECOVERING FORMER INDUSTRIAL SPACE AROUND THE CITY

1993
THE VIZCAYA BRIGDE, THE OLDEST TRANSPORTER BRIDGE IN THE WORLD, CELEBRATES ITS 100TH ANNIVERSARY

1993
THE GUGGENHEIM BILBAO STARTS CONSTRUCTION

1996
DEUSTO BRIDGE OPENS FOR THE LAST TIME

1998
ATHLETIC CLUB CELEBRATES ITS 100TH ANNIVERSARY

1998
SARRIKO STATION WINS THE BRUNEL AWARD

1998
SMASHING PUMPKINS PLAYS THE FIRST CONCERT AT THE GUGGENHEIM ESPLANADE

1999
LIGHT RAIL STARTS CONSTRUCTION

1999
FREIGHT RAILS STARTS RUNNING UNDERGROUND



ERCILLA STREET PEDESTRIAN



ZORROZAURRE MASTER PLAN



GRAN VIA STREET PEDESTRIAN



FERROCARRIL AVENUE



DESIERTO SQUARE



BILBAO EXHIBITION CENTRE



FINE ARTS MUSEUM EXPANSION



UNIVERSITY AVENUE



LASESARRE STADIUM



SHERATON BILBAO HOTEL



LASESARRE PARK



DOÑA CASILDA PARK EXPANSION



OSAKIDETZA



AMETZOLA STATION



DOMINE HOTEL



DEUSTO STAIRWAY



ZUBIARTE MALL



HESPERIA HOTEL



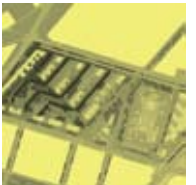
INDAUTXU PLAZA



MUSIC CONSERVATORY



ISOZAKI ATEA



GARELLANO MASTER PLAN



BILBAO AIRPORT EXPANSION



MARITIME MUSEUM



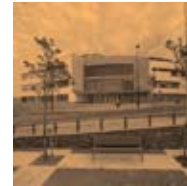
LIGHT RAIL (1ST PHASE)



PEDRO ARRUPPE BRIDGE



SAN MAMES STATION



MIRIBILLA PUBLIC SCHOOL



BASQUE GOVERNMENT



FORAL LIBRARY



AMETZOLA ELEVATORS



DEUSTO LIBRARY

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

THE SOCIETY BILBAO EXHIBITION CENTRE IS CREATED

CITTA D'AQUA AWARD GIVEN TO BILBAO AND BARAKALDO DURING THE 9TH VENICE BIENNALE

AWARD TO THE CITY OF BILBAO BY THE ECTP-EUROPEAN COUNCIL OF TOWN PLANNERS

CULTURE MANAGEMENT AWARD TO THE CITY OF BILBAO BY AICCRE

EXCELLENCE AWARD TO THE CITY OF BILBAO BY ASOCARP

BILBAO BECOMES AN URBAN RACE CIRCUIT FOR THE WORLD SERIES

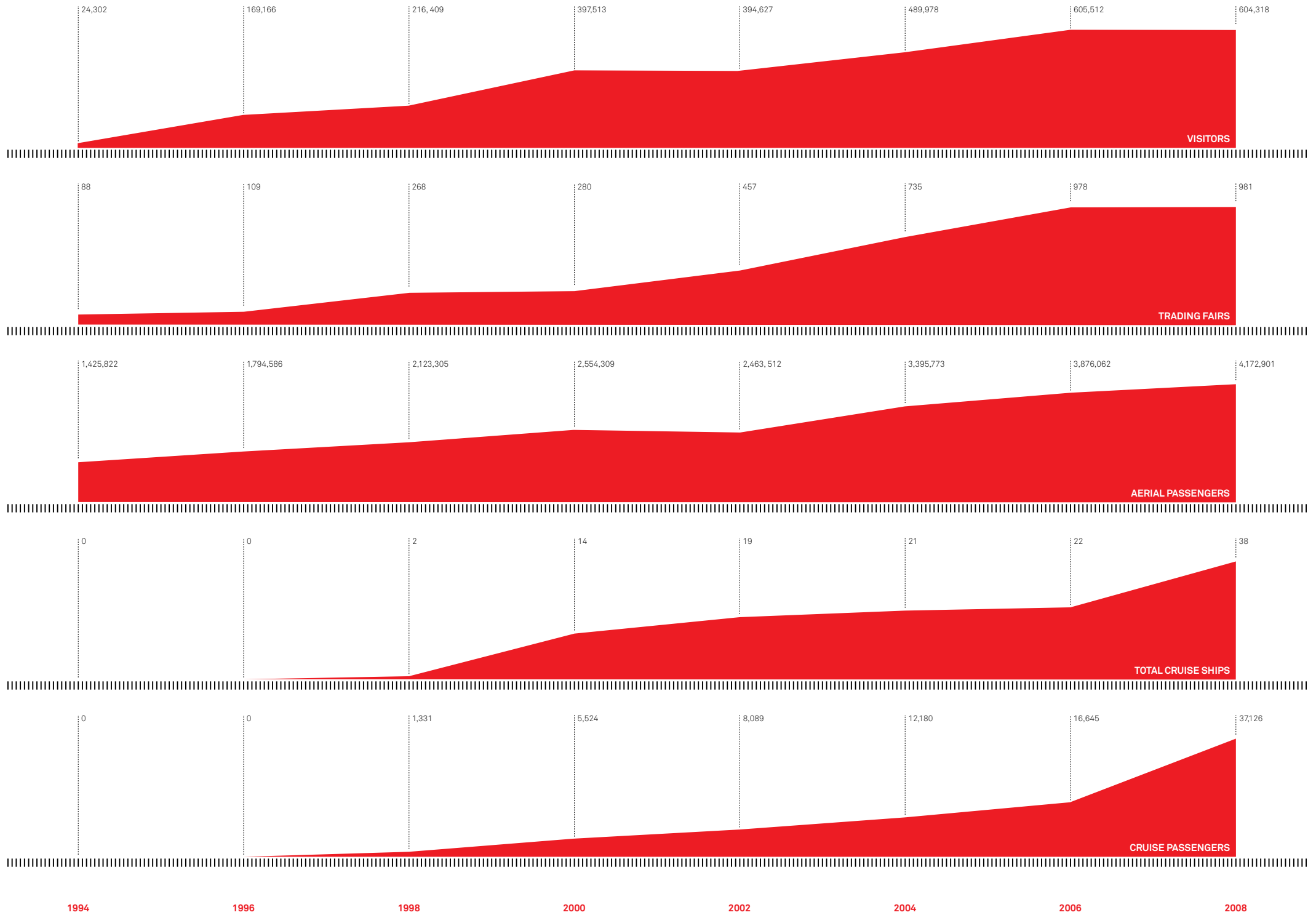
THE VIZCAYA BRIDGE IS DECLARED A WORLD HERITAGE SITE BY UNESCO

THE MUSIC FESTIVAL BILBAO BBK LIVE CELEBRATES ITS FIRST EDITION

IBERDROLA TOWER STARTS CONSTRUCTION IN ABANDOIBARRA



Abandoibarra is the most emblematic of all the projects carried out by BILBAO Ría 2000 in its regeneration of the city of Bilbao. This area at the heart of the city covers 348,500 square meters, of which 115,714 square meters are areas of greenery. Due to its former industrial uses, the general public was denied access to it for many years. When the La Ribera promenade was opened over the Evaristo Churrucá quays, the people of Bilbao and visitors to the city were able to walk around this area to discover it for the first time. Above and on the left, a series of images that show the transformation of the area since the late 1980s until its current condition.



Farmland World

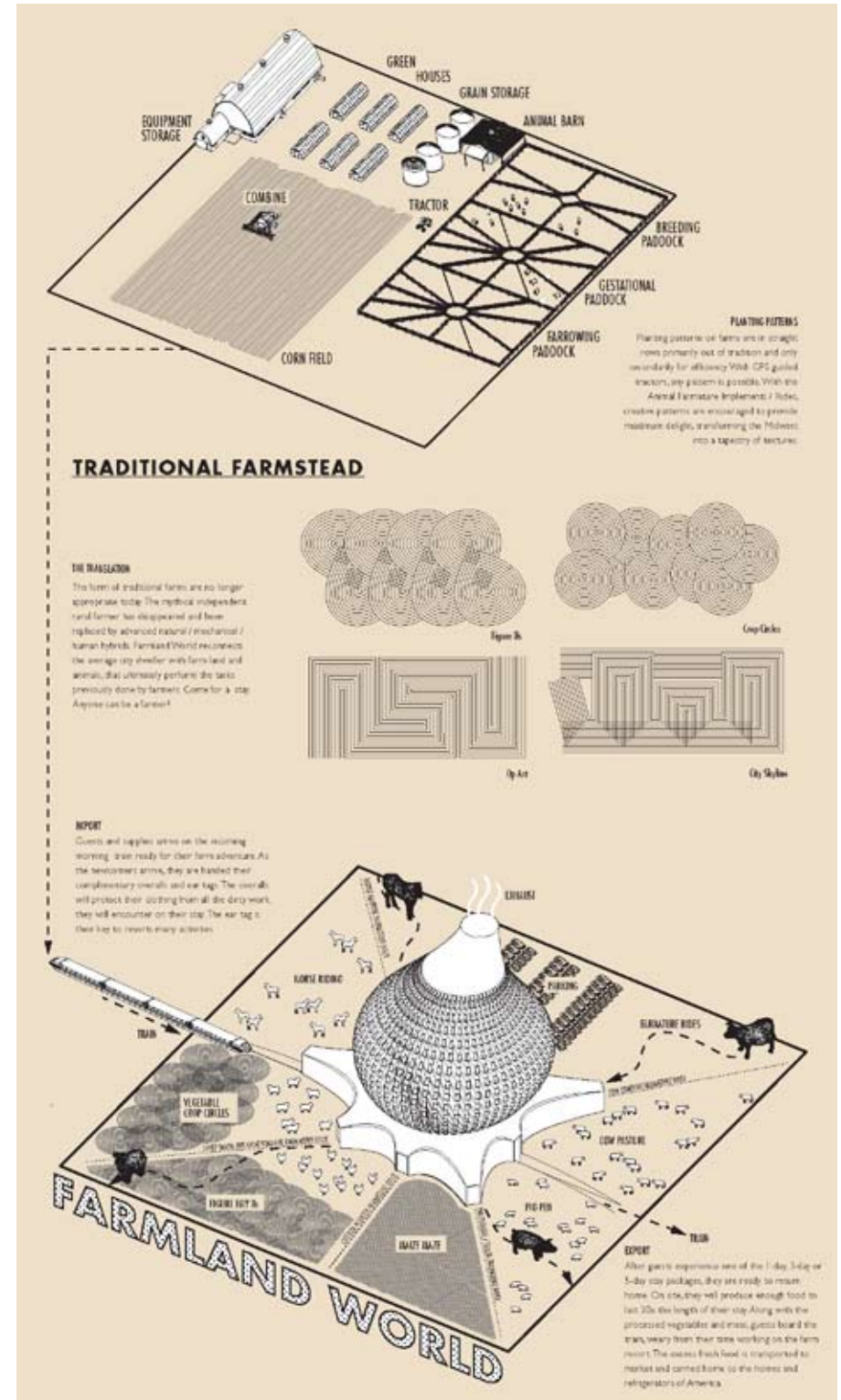
Project by **Stewart Hicks** and **Allison Newmeyer** from **Design With Company** with **Katharine Bayer** and **Hugh Swiatek**

In Farmland World, speed is a catalyst for reconfiguring the relationship between the city, the rural landscape and the animal/machine hybrids that cultivate land. Capitalizing on both recent investments in high-speed rail infrastructure and the plentiful subsidies for farming, the network of resorts combines crowd-sourced farm labor with eco-tainment. The project received a second runner-up in the Animal Architecture Awards.



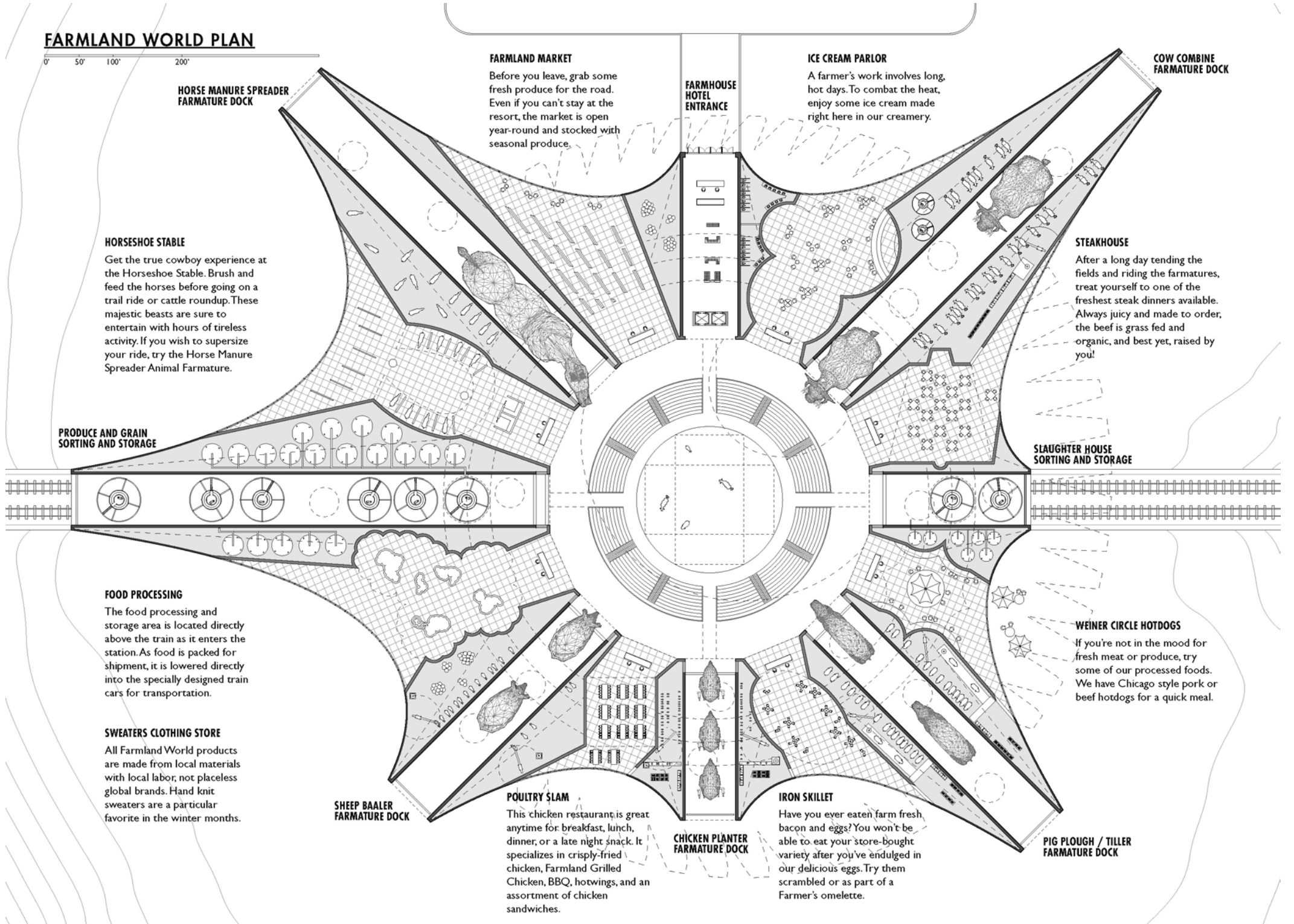
The nature of farming is forever changed. From utilitarian machinery to show piece display, both farm animals and farm machinery express a range of complex personalities. Which poses the question: can these overlaps and mutable identities expand to contend with the various crises the farm industry is facing today? In this project, speed is a catalyst for reconfiguring the relationship between the city, the rural landscape and the animal/machine hybrids that cultivate land.

Farmland World is a chain of agro-tourist resorts sprinkled across the American Midwestern countryside. Part theme park and part working farm, guests arrive to the resort via high-speed train and stay as part of 1-day, 3-day or 5-day experience packages. Guests perform daily chores as self-imposed distractions from the toil of their daily lives. Among the countless activities offered, guests can also choose to ride the Animal Farmatures, the dual natured farm implements that complete traditional farm tasks while performing grand rural-techno spectacles. When its time to leave for home, guests climb back into the train, weary and satisfied from their labors, as they marvel at the passing landscape they helped transform.



FARMLAND WORLD PLAN

0' 50' 100' 200'



HORSE MANURE SPREADER FARMATURE DOCK

HORSESHOE STABLE

Get the true cowboy experience at the Horseshoe Stable. Brush and feed the horses before going on a trail ride or cattle roundup. These majestic beasts are sure to entertain with hours of tireless activity. If you wish to supersize your ride, try the Horse Manure Spreader Animal Farmature.

PRODUCE AND GRAIN SORTING AND STORAGE

FOOD PROCESSING

The food processing and storage area is located directly above the train as it enters the station. As food is packed for shipment, it is lowered directly into the specially designed train cars for transportation.

SWEATERS CLOTHING STORE

All Farmland World products are made from local materials with local labor, not placeless global brands. Hand knit sweaters are a particular favorite in the winter months.

SHEEP BAALER FARMATURE DOCK

FARMLAND MARKET

Before you leave, grab some fresh produce for the road. Even if you can't stay at the resort, the market is open year-round and stocked with seasonal produce.

FARMHOUSE HOTEL ENTRANCE

ICE CREAM PARLOR

A farmer's work involves long, hot days. To combat the heat, enjoy some ice cream made right here in our creamery.

COW COMBINE FARMATURE DOCK

STEAKHOUSE

After a long day tending the fields and riding the farmatures, treat yourself to one of the freshest steak dinners available. Always juicy and made to order, the beef is grass fed and organic, and best yet, raised by you!

SLAUGHTER HOUSE SORTING AND STORAGE

WEINER CIRCLE HOTDOGS

If you're not in the mood for fresh meat or produce, try some of our processed foods. We have Chicago style pork or beef hotdogs for a quick meal.

POULTRY SLAM

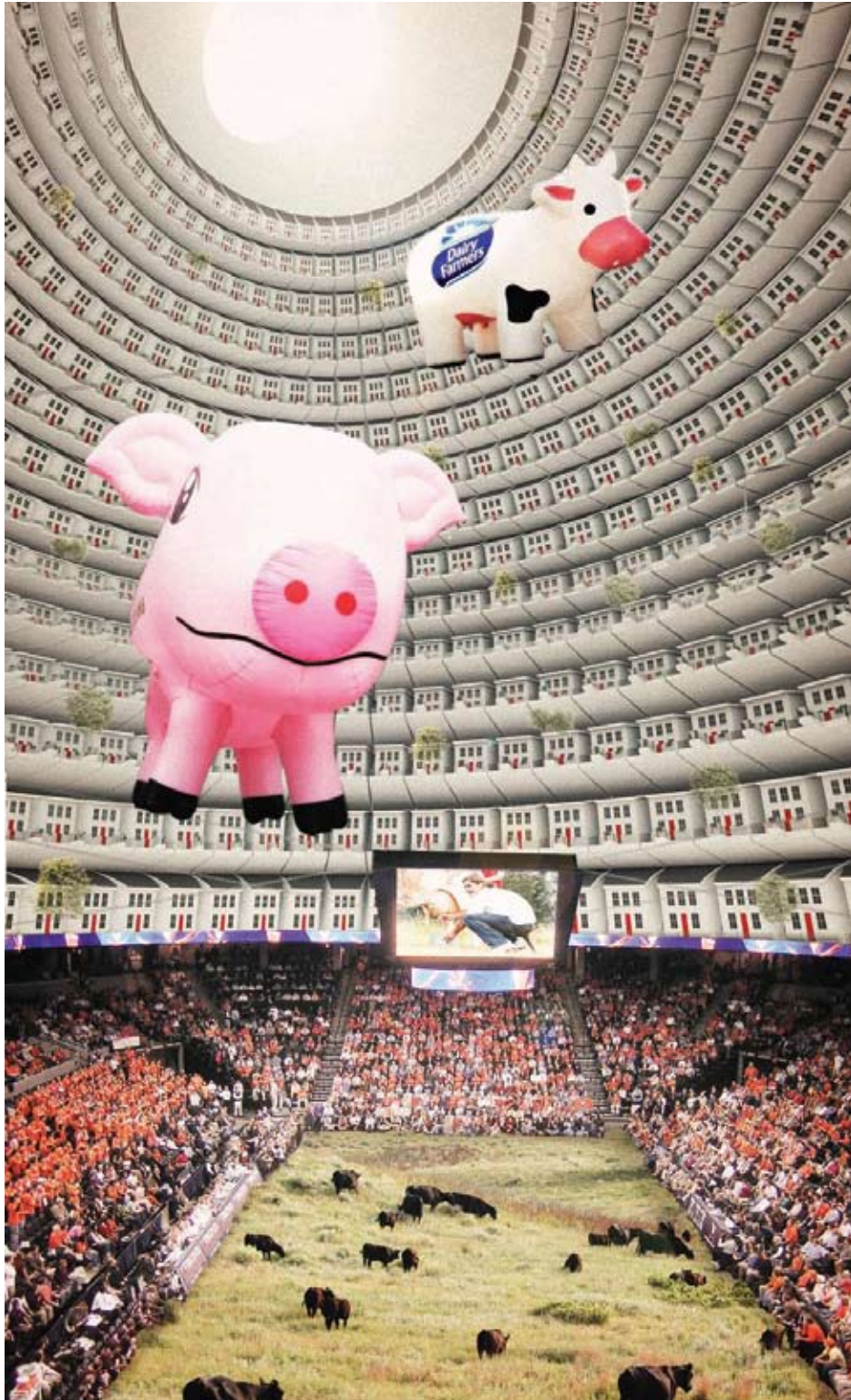
This chicken restaurant is great anytime for breakfast, lunch, dinner, or a late night snack. It specializes in crispy-fried chicken, Farmland Grilled Chicken, BBQ, hotwings, and an assortment of chicken sandwiches.

CHICKEN PLANTER FARMATURE DOCK

IRON SKILLET

Have you ever eaten farm fresh bacon and eggs? You won't be able to eat your store-bought variety after you've indulged in our delicious eggs. Try them scrambled or as part of a Farmer's omelette.

PIG PLOUGH / TILLER FARMATURE DOCK



FARMLAND WORLD SECTION

0' 50' 100' 200' 400'

① FARMHOUSE BULB HOTEL

Like stables for people, rows of farmhouses line the walls of the resort. Each house is distorted, rendering each one unique while reaching for maximum sunlight on the exterior and craning for the best view of the central exhibition space on the interior.

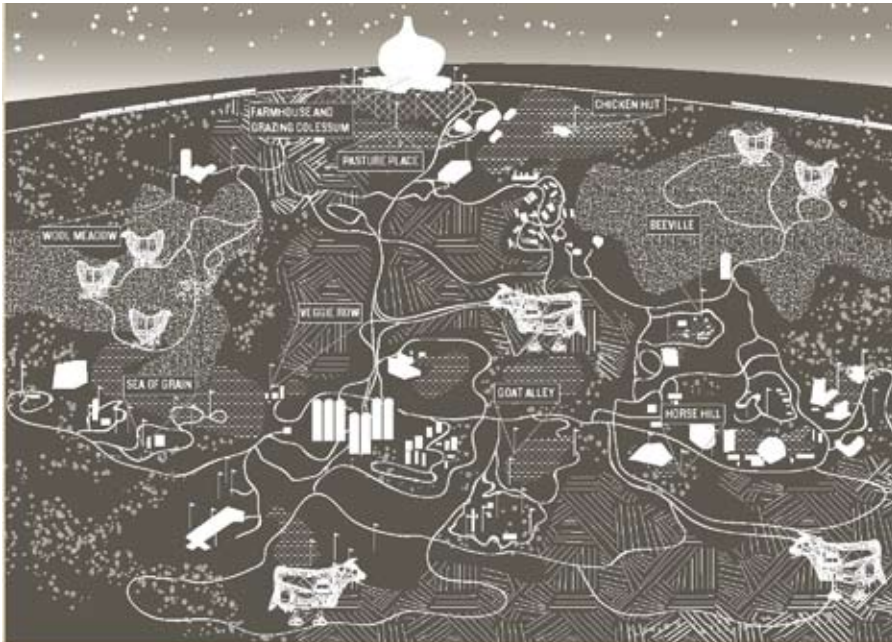
③ IRON HORSE TRAIN STATION

The proposed high-speed rail lines weaving through the fabric of the Midwest will bring a renewed consciousness of the middle and connection to the land. The resort capitalizes on the pulse of this new network through the rail station located underneath the resort.

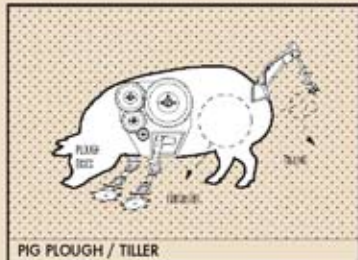
② ANIMAL FARMATURE VIEWING

Resort guests are encouraged to get close to both sets of animals, the farmature machines and the domesticated organic variety. As part of the resort experience, they tend to the needs of each as well as reap the rewards.

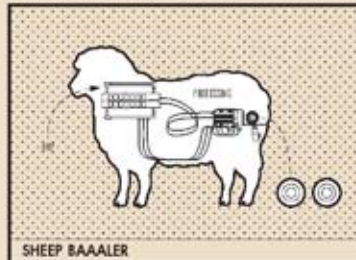




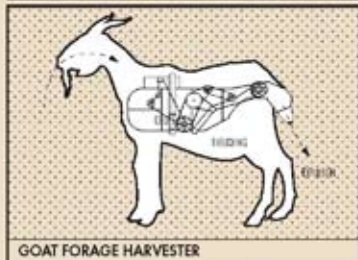
ANIMAL FARMATURE RIDES



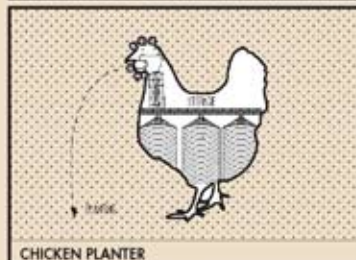
PIG PLOUGH / TILLER



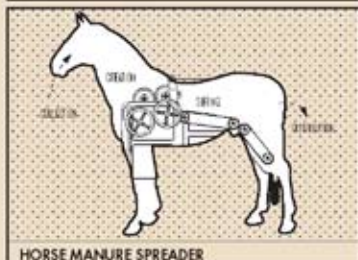
SHEEP BAAALER



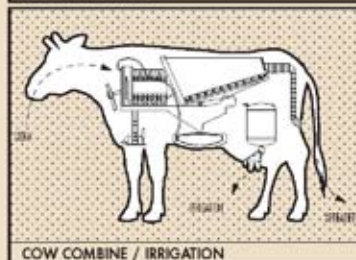
GOAT FORAGE HARVESTER



CHICKEN PLANTER



HORSE MANURE SPREADER



COW COMBINE / IRRIGATION

ECO-VACATION GUIDE

Every day is magical at FarmLand World. The pastoral meets state-of-the-art resort facilities--your dream come true! As you travel by high speed rail to our Family Farmhouse Resort, you will be greeted by our roaming Farmatures, sowing and plowing the fields. Your farm adventure begins the moment you step off the train and on to your very own front porch in the Grazing Stadium.

As you spend your days on the farm, you will get to know many of our furry and feathered friends. Exploring comes first at Farmland World. From Dairytown to Beeville, Pig City to the Chicken Hut, Veggie Row to Wheat Island, the fun never stops. Maize Maze is one of our favorite Harvest Festival Activities.

Visit Farmature Elsie and her herd of 300 dairy cows, learn the names of all the hens at the Chicken Hut, pick berries at Fruit Mountain, or safari at Pasture Place. Evenings are family time. Dine at our famous family style restaurant, Supertime, and enjoy farm inspired dishes from world-famous chefs. Barndances are held every night, and a must see is the Animal Ball. We can't wait for you to spend your vacation with us!

EXPERIENCE PACKAGES



**SEED PACKAGE:
ONE-DAY FARMER EXPERIENCE**

Sow oats with us! Your day escape begins with an introduction to Farmature grazing in the Grazing Colosseum. Spend your morning learning the ins and outs of seeding in one our Farmature Cluckers. Wander through the Chicken Hut and select your own farm fresh eggs or chicken. Dine in the Poultry Slam--make your own omelet or have one of our fry cooks assist you in processing your chicken! Spend your afternoon with your flock sowing seeds in our Figure Hay8 or Maize Maze. Your one-day seed package will plant enough food to feed twenty of our feathered friends!

**CATTLE DRIVE:
THREE-DAY FARMER EXPERIENCE**

Every moment will captivate you on this moooolicious experience! You will be assigned a cow, goat or sheep Farmature of your choice, which you will care for the extent of your visit--Elsie the Heifer is a popular combine model! Harvesting your excitement is our goal. Visit Dairytown and milk a cow: you can make cheese, ice cream or yogurt with our tour guides. Cow-a-bunga!

FARMER FANTASY: FIVE-DAY FARMER EXPERIENCE

Want to work it? Spend each day of your agri-tour perfecting the art of the Farmature: horse, chicken, cow, goat, sheep- you can farm it all! Select several of our mini-classes to satisfy your cravings.



Meet Meat: Carnivores Welcome!

Ever wondered how the meat gets on your table? Make your vacation worthwhile with our mini-meat-science workshops. Chickens, pigs and cows, oh my!



BeeeeeExtravaganza!

This escape takes you into the hive. Learn how to set up your own bee box, extract honey, and care for bees. Tour our buzz garden and learn about the art of honey making! It's soo sweet!



Wool Works!

Ewe into sweaters? So are we. Choose from any of our flock for your own: shear, dye and knit to your heart's content!

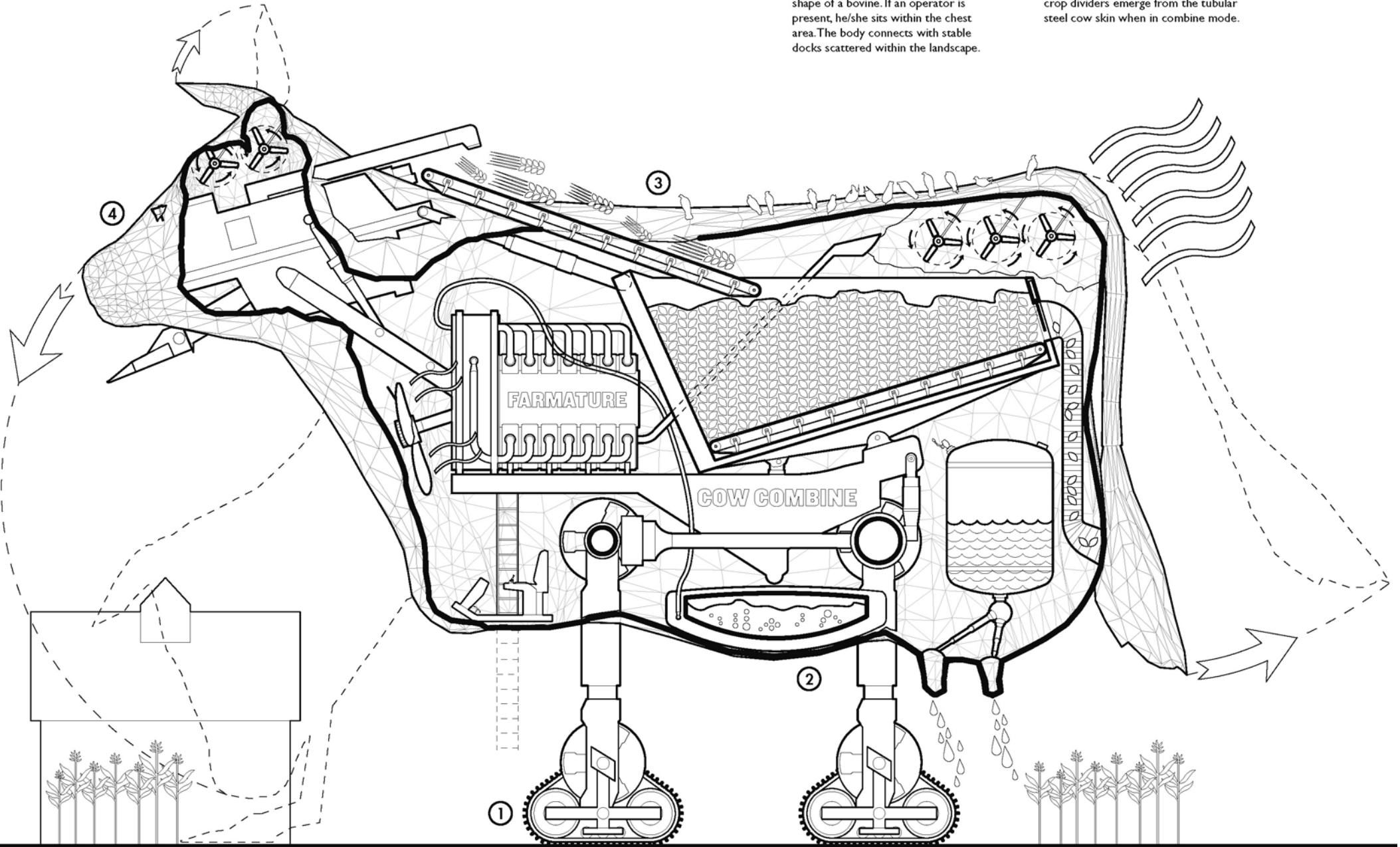
FARMATURE RIDE SECTION

① THE LEGS
The legs articulate to provide propulsion between crop rows and raise to greet passing trains.

② THE BLADDER / BELLY
This area is for irrigation, fuel, coolant and lubricant storage. Water is channeled into the spray nozzels located within the udders.

③ THE BODY
This is where crops are processed and stored. It houses the engine and fluid circulation for the combine and irrigation systems. The machinery is enclosed in a tubular steel cage in the shape of a bovine. If an operator is present, he/she sits within the chest area. The body connects with stable docks scattered within the landscape.

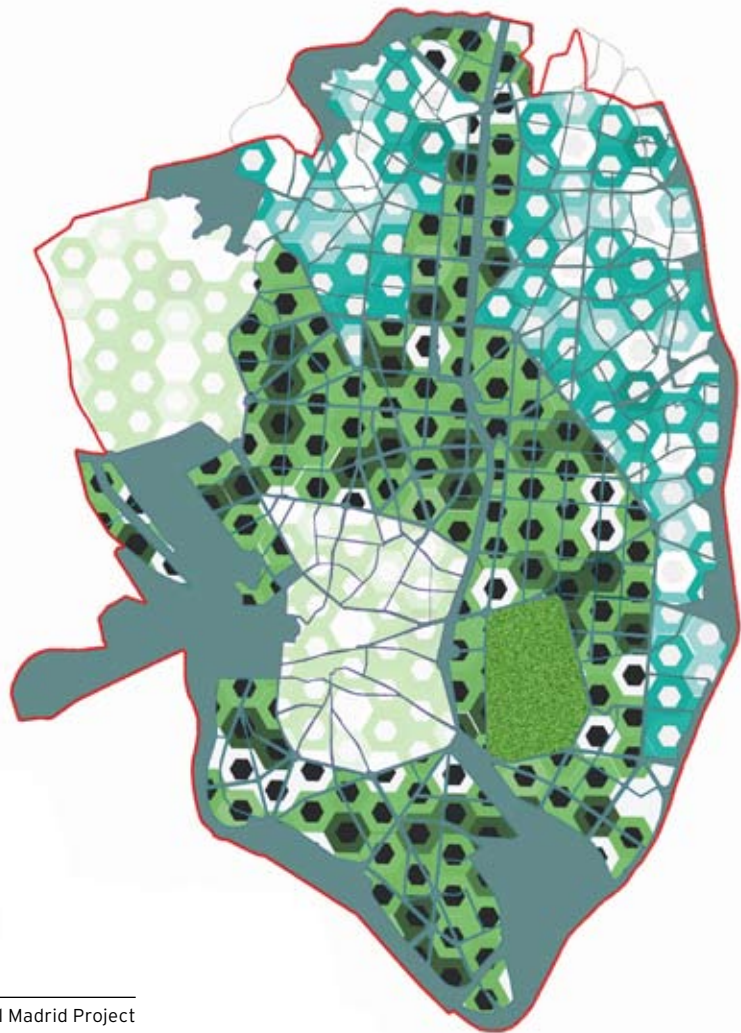
④ THE HEAD
The head serves as the primary intake unit for the farmature. It houses the air, water and crop intake valves and vents. The head articulates to both collect crops and bow to train patrons. The crop dividers emerge from the tubular steel cow skin when in combine mode.





A Strategic Vision for the Center of Dense Cities: Madrid as a Case Study

Essay by **José María Ezquiaga** and **Juan Herreros**, architects and directors of **Proyecto Madrid Centro**



Central Madrid Project

A New Urbanism of Transformation and Recycling

If there is an urban dynamic par excellence, it is change. Change is an inherent condition of the city: a permanent activity affecting the tissues, organs and systems in search of an instant balance.

Lately, we have witnessed the overlapping of changeable functions in our cities and, even more, the increased speed of these processes. Speed in this sense is the deciding factor, as it does not parallel events, and the variety of speeds systematically falls out of step in order to agree with reality. We do not, though, have the same anxiety for the vertigo of acceleration as we had three decades ago. We are now facing a new phenomenon, one that multiplies the speeds so that some processes simply cannot follow the pace of the events, while others introduce a concept of urgency far beyond the capacity of the system to accept anything new.

This change is not associated with the growth or the vanquishing of void spaces, nor to the process that builds new and each time bigger civic buildings that try to solve and profit from specific functional shortages. The reshaping that truly affects the contemporary city is a *metabolic* one. The former is typical of the extensive cities, able to grow across the territory, with low density or with great contrasts between a dense city center and a more or less structured sprawl. The latter is materialized in urban areas in which the limited space and the high density extend over a territory that exceeds the proportionate city center-suburbs of the Anglo-Saxon culture. They are cities that, until recently, we called “consolidated,” ones that have developed a complex network of new economic, social and cultural dynamics flowing with the emergence of a new mobility, new sensibilities (such as the environmental), new individualities and new communities.

They are presented as stable fabrics, finished cities with few specific interventions left; cities in which urbanism gives way to architecture, cities that don't think globally any more because actions in them are necessarily isolated. Meanwhile, urban science and its tools continue to look for less compromised territories, emptier spaces in which to program long-term growth or to apply normative arguments that have little compromise over results visible only after the passage of time that goes beyond the capacity of memory for the changing world in which we live.

These cities have a city center that is neither the historic one nor the financial one. It is a city center that goes beyond these definitions,

spreading out until the dense outskirts themselves begin to act as central nodes. Many European, Latin American and Japanese cities belong to this model, as well as New York and New Orleans.

For these new city centers, the traditional urban planning based on a more or less predictable future does not work. We have to work in real time, overlapping the action to a series of events that is not easy to anticipate and control. Once again, the lack of coordination between speeds creates an operative void that leaves the city at the expense of other forces outside the discipline.

We live in a moment of global recession that has its bitter side in certain countries, but what has happened in Ireland, Portugal, Greece or Spain is a common issue when we are discussing cities and the overlapping of uncontrollable speeds regarding the topic of transformation. The case of Spain is especially revealing. There, the housing boom experienced during the last decade fomented the illusion that the market could support the urbanism. The systems disassociated from the real needs of the citizens, unable to assume the complexity and speed of the process of growth and obsolescence, have ended up being mere infrastructure and urban guidelines cut out from the reforming vocation that defined the beginnings of urbanism. They have become rituals, most of the time incomprehensible for the citizens, creating a schism between a community in transformation and the greater instruments of planning. On the one hand, citizens create their own vital channels and establish themselves in the unstable condition with more confidence than the planners, who still believe they are working towards the future, but in fact it's already arrived and they suddenly have to rush in a convulsed present.

The harsh reality of this crisis has revealed this contradiction to the known dramatic consequences, but it also provides an opportunity to reformulate the urban tools from a much-needed solid ground. It provides a possible answer to the fast transformations of the city from the perspective of an urban culture in constant redefinition, calling into question criteria that once seemed untouchable, questions from a culture that demands modes of participation unimaginable not long ago while also needing an environmental sensibility no longer anti-system and, actually, quite the contrary. These are the new ingredients needed to reorient the character of large-scale urban master plans and turn them into truly stimulating tools, flexible and open to innovation, able to address emerging issues of the contemporary

Comparison of population, density and GDP per capita

City	Population (millions)	Density (hab./km ²)	GDP per capita (mil €)
MADRID	3.2	5,304	28 mil €
NYC	8.3	9,610	39 mil €
BERLIN	3.4	3,810	21 mil €
LONDON	7.6	4,800	38 mil €
PARIS	6.5	8,539	36 mil €
ROMA	2.7	1,981	25 mil €

city (an active incorporation of nature, energetic sustainability, and alternative ways of mobility) without losing sight of quality of life and social cohesion (health, access to housing, community decline) and ultimately, a sensibility to local elements (unrepeatable history and culture of each place, the creative capacity inherent in each culture, and identity values both tangible and intangible).

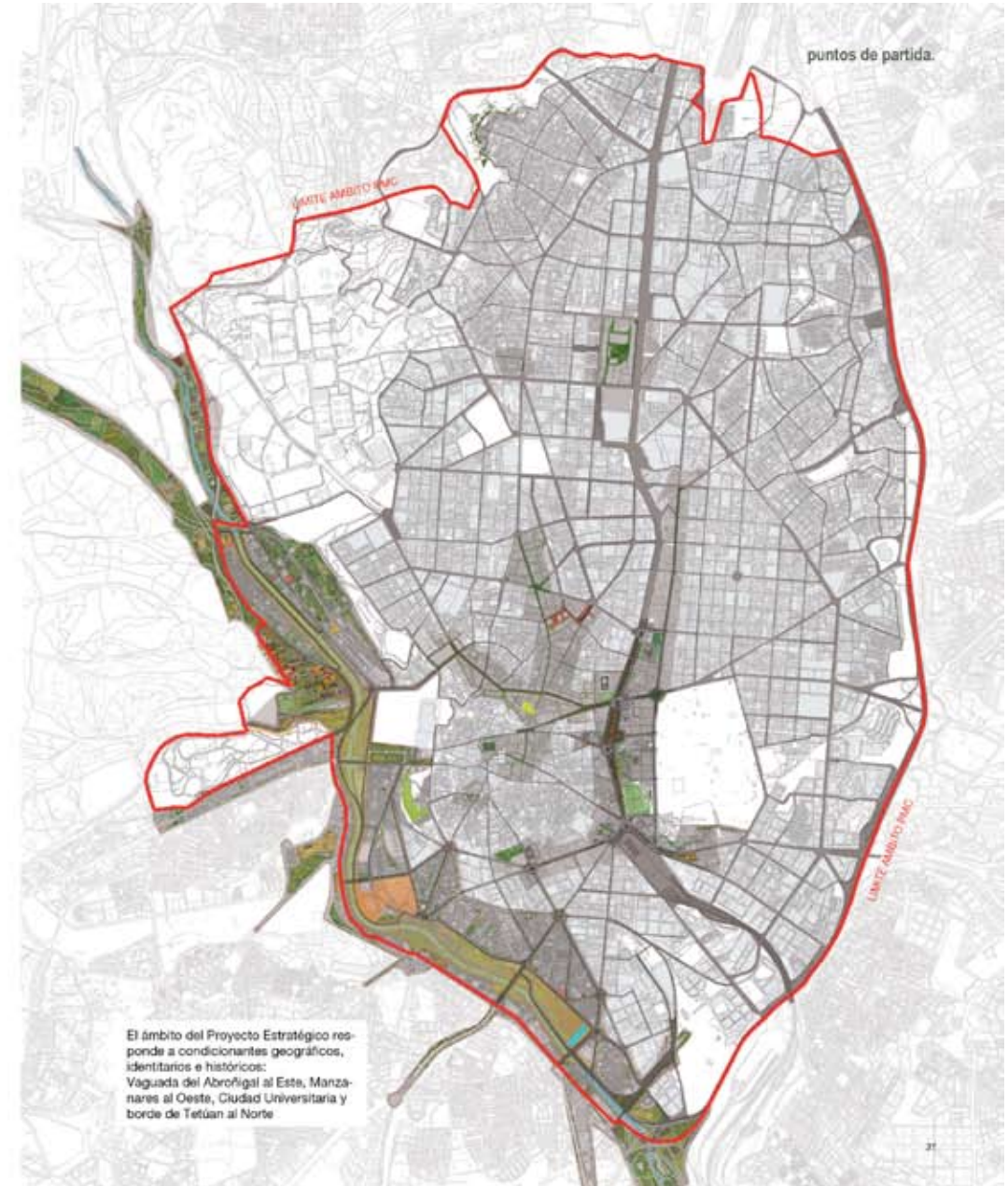
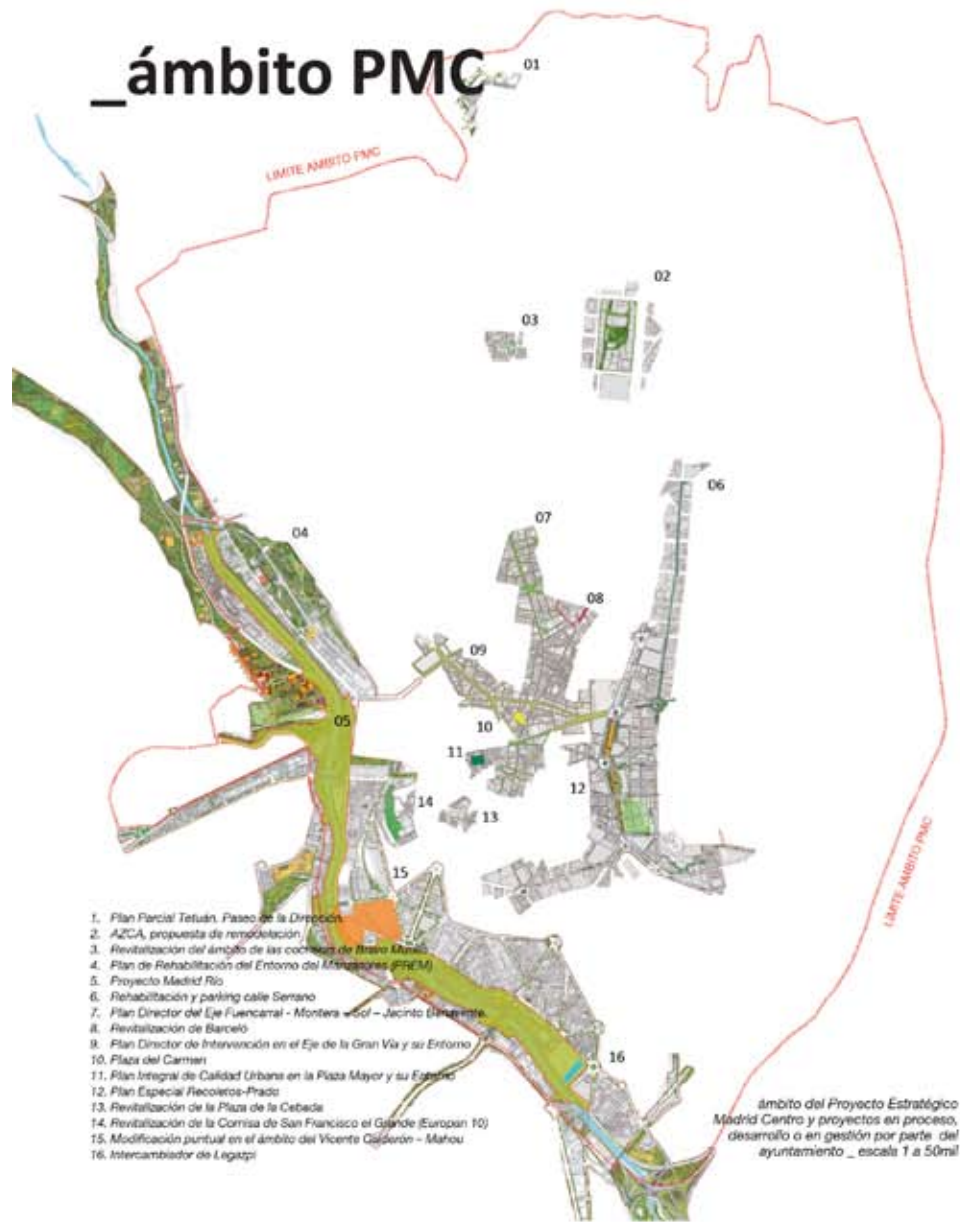
Madrid: a city in accelerated transformation

The “Proyecto Madrid Centro” (Central Madrid Project) (1), an initiative of the City of Madrid, represents the opportunity to test the concepts and proposals of a **new urbanism** able to address the challenges created by globalization, climate change and social transformation from the **recycling** and **transformation** of the existing city.

The analysis of the main elements of the central area of Madrid demonstrated the need to act decisively and urgently in five essential areas:

- Socially, the decade is characterized by the rapid changes experienced in the structure of the population of Madrid. In the last few years, there has been an acceleration in the spatial movements between the intra and extra urban areas, leading to segregation and inequality in the population of Madrid and the remains of social marginalization. As well, the structure has suffered from imbalance and aging issues, with an evolution very distinct across the neighborhoods, depending upon whether or not they have seen migration or

AREA OF STUDY OF CENTRAL MADRID PROJECT



if it has been the focus of a functional transformation. In general, the population in the central area of Madrid has become younger due to the migratory contribution, but the decrease in representation of the younger ages is striking, especially children.

- Economically, Madrid has evolved from a centralized macrocephaly due to the loss of relative importance in its relationship to its metropolitan surroundings. In the last decade, Madrid followed the path of the Anglo-Saxon urban model: a growing tendency of metropolitan suburbanization, first of families and then of institutions and economic activities. It is the case of the so-called “financial cities” and the big civic buildings relocated in the periphery.

This process is particularly worrisome in regards to the most innovative activities. The structural and normative obstacles become other problems that the city has to overcome to efficiently attract talent and innovation to the central areas.

- Accommodation in the city center is characterized by a pronounced heterogeneity, where the processes of modernization coexist with vast areas of structural deterioration. In short, it can be said that the housing “boom” experienced during the last decade has been evident in the city center because of gentrification (attraction of higher suburban incomes to renovated areas of high quality) or “ghettofication” (consolidation of vast areas of deteriorated housing linked to immigration, particularly the illegal variety). Similar to the economic field, there are social, financial and administrative difficulties in implementing efficient policies of recycling and renovation. Among the obstacles that need to be overcome, we can hope for the obsolescence of the Plan General de Ordenación Urbana (General Plan for Urban Zoning) itself.

- In regards to the public space and landscape, a process of increased banality and lost identity is detected and associated with the deterioration of the urban environment caused by the preeminence of the car. The placement underground of the radial highway M30 in its South sector brings up the opportunity to transform the Manzanares River into the spine of a green system that can infiltrate into the urban fabric. At the same time, against the homogenization and increased banality of the public space, there are emerging tendencies that rediscover local identities subject to be promoted through themed strategies of the public spaces of the neighborhood.

- Accessibility to the city center is strongly determined by the economic and institutional centrality. In the last decades, there has been a sustained increase in the demand for mobility, which was matched by a substantial improvement in the public transportation. To this we have to add the situations generated by the main municipal interventions done in the road infrastructure of the city during the last few years: the already mentioned tunneling of the M30 South, the start of the restructuration of the Prado-Recoletos corridor, and the selective transformation of streets into pedways in neighborhoods as emblematic as Las Letras. There are still, however, problems associated with the excessive use of the street by the car and parking areas, a problem that, as we will point out later, has been a top priority in the Project.

From expansion to recycling

The nature of the problems in the central area of Madrid demands a deep change not only in the objectives but also the object itself of the Project, from indiscriminate expansion and growth to the transformation, renovation and recycling of the existing urban fabric, infrastructures and activities, and from zoning to the improvement of the quality of life of its citizens.

The “Central Madrid Project” adopts as its strategy the value of the social, economic, spatial and symbolic capital of the central area of Madrid and the understanding of the city via the real processes that define it, rather than from regulations. The need is to address the spatial and social complexity of the city from an understanding of a likewise complex set of urban techniques and interventions, and adopt a style of flexible management within the framework of “strong” strategies able to raise large social support.

Thus, this strategy is organized around a series of core themes:

- Public space as an organizing system, identity reference and mediator element between city and citizens.

It is necessary to reinvent the local public space as the main aspect of urban transformation. The Strategic Plan starts from the premise that the quality of the public space is the most relevant catalyst to trigger the transformation of the city. As a result, it is necessary to reinvent the public space from the perspective of limiting and rationalizing the preeminence of the car and recover the street for the economic and social activities of pedestrians and cyclists.



Renovation and recycling of the existing urban fabric

BLOCK USES

INNOVATION IN SUPERBLOCKS





Current condition on versus potential for transformation

This approach is based on the most simple, yet also richest element of the system of urban public spaces: the street. In the city center, the street becomes the reference for buildings, the structure for mobility and, through its commercial base, the membrane of interaction between public and private. For this reason, working with the relationship between street and building creates the opportunity to explore the potential of an urban fabric rich in available space and offering the possibility of rethinking the activities, densities and volumetric configuration of the urban block.

Far from understanding the city center fabric as exhausted, the Strategic Plan proposes a rethinking of the organization of the built space, from the perspective of what we are denominating “new urban cell.” This is based on two main ideas, noticeable in the plans of new spatial organization for the city center area as well as in the application in a typical block. From the discrimination of the traffic exclusive to residents, we are able to generate environmental areas in which it is feasible to reverse the uneven distribution of the use of the street between cars and citizens that, nowadays in Madrid, is reflected in a disproportionate predominance of the car. While they only provide 30% of the trips from and to the city center, they benefit from the 70% of the area of the street. The Strategic Plan offers an alternative, radical

but susceptible of being gradually implemented and at a low cost, to the need to introduce limitation to the indiscriminate access of cars to the city center without affecting accessibility as an essential quality associated to centrality. The structure of the main streets guarantees the access with public transportation and cars to the entire urban grid, but the secondary grid of streets with restricted access for the residents allows the creation of a complementary network in which pedestrian comfort, bike accessibility, sidewalk greening and the commercial and economic activities become the main aspects. The “new urban cell” also becomes the coherent area to reorganize the access for the citizens to nearby services and civic buildings, an important correction tool to the geographic inequalities.

- The naturalization of the city as an active strategy to build a new urban landscape.

The Strategic Project gives a key role to the recovery of the geographic memory of the city. The original topography, the course of water, the cornices... they have all frequently been eclipsed by the predominance of the homogenous built environment and mobility. A good example of this issue is the role that, during four decades, the Manzanares River has had as the support for the urban highway M30.

The Project proposes the establishment of a new local green system organized around the recovery of the Manzanares River that, at the same time, becomes the link between the big natural spaces of the region of Madrid: Sierra del Guadarrama, Cuenca del Manzanares, Monte de El Pardo, Parque del Jarama and Vegas del Tajo-Tajuña.

This strategy articulates the connection between the main green areas of the interior of the *Almendra Central* (Central Almond) of Madrid through a network of green streets and small plazas in order to make up true environmental corridors in the interior of the city. Those would be reinforced with the incorporation of nature in the built fabric itself: vertical gardens and green roofs.

The goal is to achieve a positive synergy between the improvement of the urban quality and the mitigation of the climate change, starting the change in the central city. It would transform from the drain of the energetic consumption to a potential producer of clean energy and the drain for carbon.



Naturalization of the city

NATURALIZATION OF THE CITY



- City center as the economic asset of the city of Madrid.

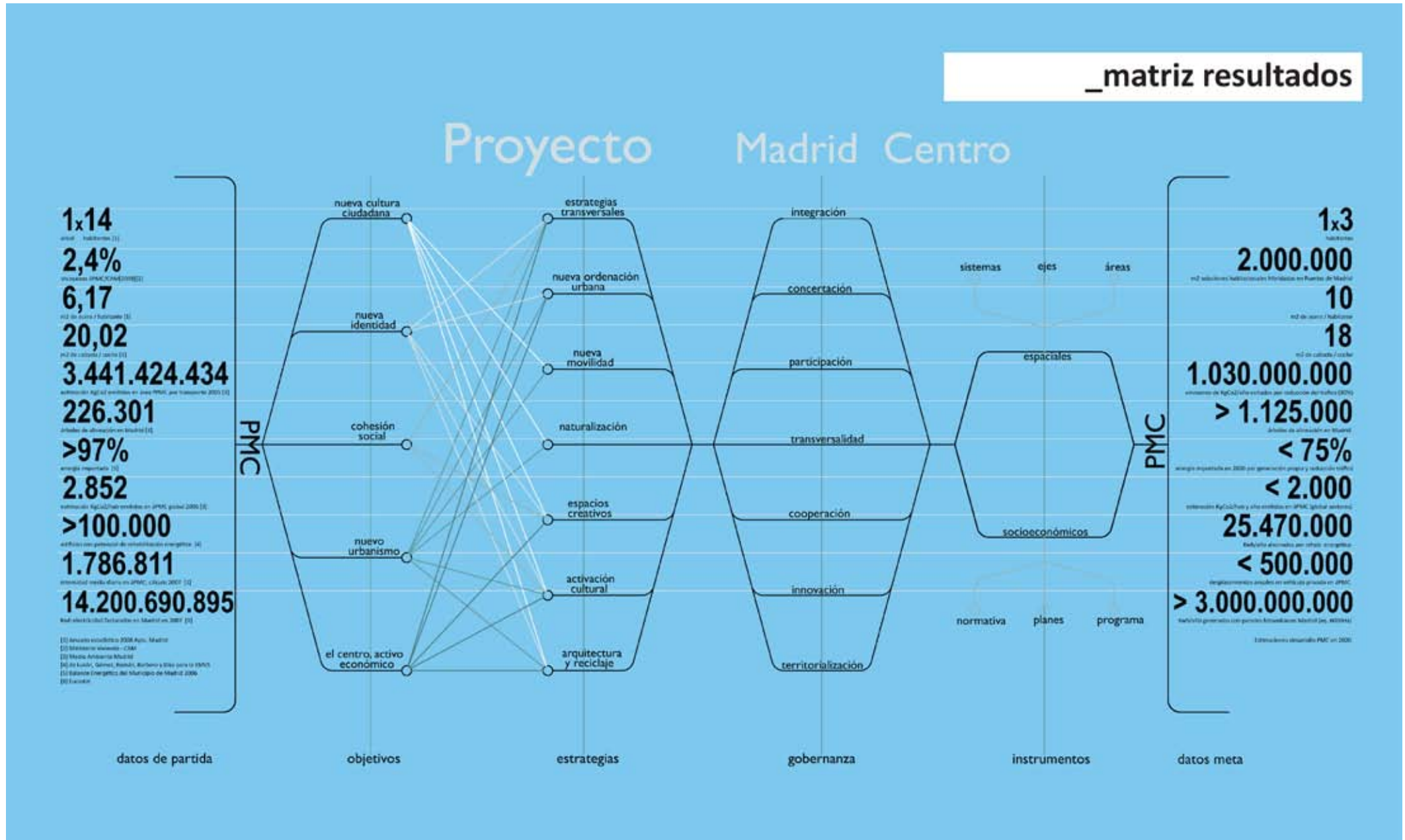
As a response to the emerging process of suburbanization, the project promotes maintaining the central location of the public, private and cultural institutions and corporations, understood as an asset of the city as a whole as well as to its metropolitan area. In that sense, the Project chooses a “Hybrid Madrid,” defending the integration of a wide range of commercial and economic activities (traditional and innovative) within the residential fabric. Considering this mix as the base of the urban complexity, the Project also proposes the establishment of innovative activities that comprehend the economic value that the scientific, cultural and artistic creations have in the modern metropolis. In that sense, it generates multiple actions oriented to facilitate the creation of an attractive environment in which people and activities related to creation and innovation can be located. That is, it supports the attraction of creative talent over the objective conditions of a complex social and economic fabric and an urban space of high quality.

- Create an identity from the recognition of the plurality of a complex city.

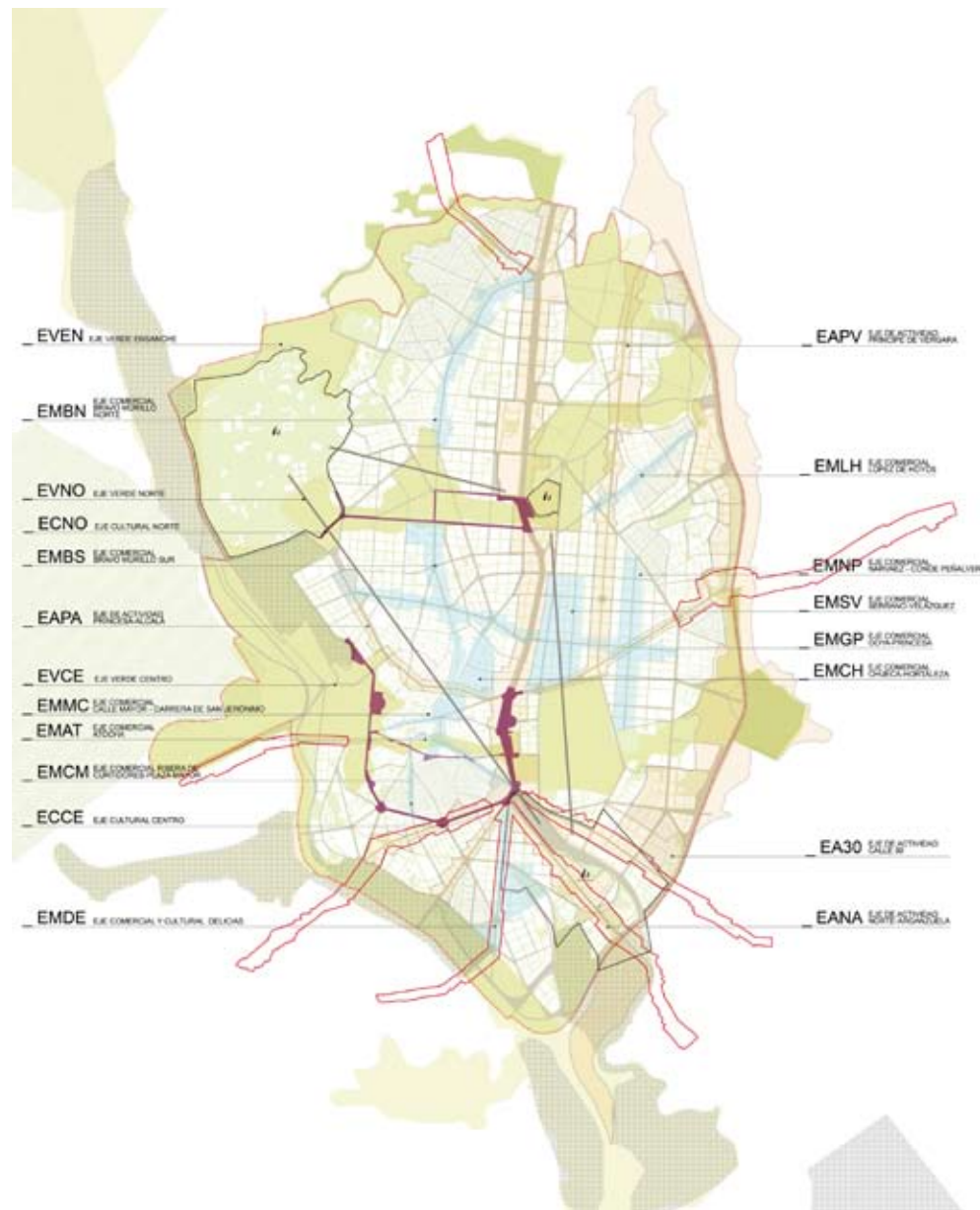
The Project gives the city center a critical role in reshaping a shared identity. The city center becomes the reference and the shared space for the residents of Madrid. Historically, this quality has been reinforced by the presence and the powerful attraction of the singular public spaces and major civic buildings. The Project wants to maintain this asset and round it off with a “Madrid próximo” (Close Madrid), with the promotion of the local identity mosaic linked to the melting pot of differentiated social spaces that nowadays make up the city.

As it has been stated previously, public space and civic buildings in close proximity become key elements in the new “cell” organization of the city center.

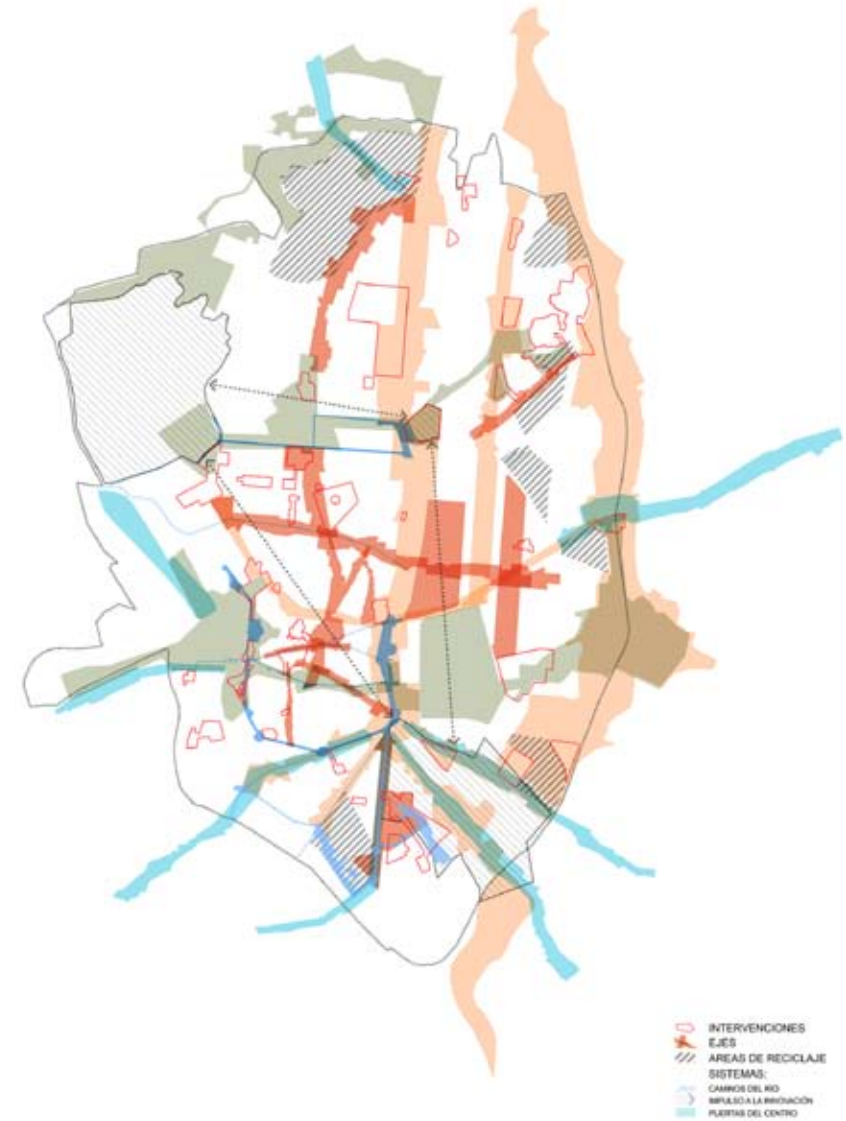
MATRIX OF RESULTS



ORGANIZING CORRIDORS



SUMMARY OF THE PROPOSAL



A new culture of public management

Finally, the translation of the strategic elements into actions and of those into social, architectural and infrastructural projects demands from the public sector and private corporations a radical change in the style of management or governing regarding to three key aspects:

Integration: recognition of the plurality of interests and sensibilities present in the city center.

Agreement: create a shared strategy from cooperation, institutional and civic participation and negotiation.

Section: establish a complex strategy capable of integrating local forward-thinking approaches from the public institutions as well as from the civic society of Madrid.

In short, Madrid needs an urbanism that assumes as a starting point the plural demands of the society. It needs to give up the pretension of replacing the complex geographic and social reality of the city with mere regulation, and adopt instead alternative principles to the bureaucratic opacity: **transparency, flexibility and direct civic participation.**

Colophon

The “Central Madrid Project” can be presented as a valuable opportunity to establish a test laboratory of an operative methodology for dense cities. Nevertheless, the condensation of the research in time and space and its offer as an operative manual for the present and immediate future of the city makes us recap what, from this experience, we can extrapolate to the disciplinary need that suffocates us: how to implement working mechanisms that allow us to observe, interpret, describe and act in the contemporary city, a place understood as a network of diverse systems and speeds that look for a coexistence full of contradictions.

It is not crazy to talk about the reestablishment of a science that remains trapped in the complexity of its own tools, overwhelmed by that other exponential complexity that is reality. It is not crazy to try to summarize a first set of criteria which need to be implemented from this moment on to increase the compromise between means and objectives and address without any reservations the factor that truly generate our cities. In that sense, the main Urban Projects will have to be considered from new criteria:

a) As an expression of the value and the social, economic, spatial and symbolic capital of the existing city, giving up the illusion of unlimited urban growth and expansion. Instead, cede priority to the activation of the urban center, the reprogramming of the vacant urban spaces, the recycling of the defining housing stock, the integration and mix of uses, and social cohesion.

b) As a vehicle of intergenerational responsibility summarized in the concept of sustainable growth, this conception of growth has basic consequences over the conventional approach to urbanism and management of resources. It demands a prediction of the consequences of the processes of long-term spatial transformations, as well as the adoption of policies that reflect the real costs of the consumption of the territory and its impact over the non-renewable resources.

c) As a framework of negotiation of the plural interests existing in the city, understood to be not only as those belonging to the traditional actors (government, neighborhood groups, land owners, building contractors and developers), but also the voices that have been excluded from the conventional urban discourse, especially women and the more fragile sectors of society (children, elderly, cultural minorities).

d) As a useful tool to manage the real processes of the city. It is unlikely that the social, geographic, historic and morphologic complexity of the contemporary cities can fit in the statutory zoning. On the contrary, these conventional tools often become a serious obstacle to addressing the essential problems of the contemporary planning: the unsustainable quality of a model of land use and occupation of territory based on the massive consumption of land, water and energy.

1. Central Madrid Project (2011) is an initiative of the Oficina del Centro del Área de Gobierno de Urbanismo y Vivienda del Ayuntamiento de Madrid. It is directed by architects José María Ezquiaga, PhD, Juan Herrerros, PhD and Salvador Pérez Arroyo, PhD with the collaboration of Javier Barrios and Ramón Bermúdez (Coordinators) and Ariadna Cantis (Communications manager).

It also includes the following experts: Ariadna Cantis (Culture and Communication), Juan Fisac (Mobility), Eva Hurtado (Actions), José Luís Maldonado (Mobility), Jesús Leal (Society), Gemma Peribañez (Methodology), Salvador Rueda (Environment), Pep Ruiz and José Antonio Herce (Economy), Belinda Tato (Environment) and Julio Vinuesa (Housing).

Talk To Your City

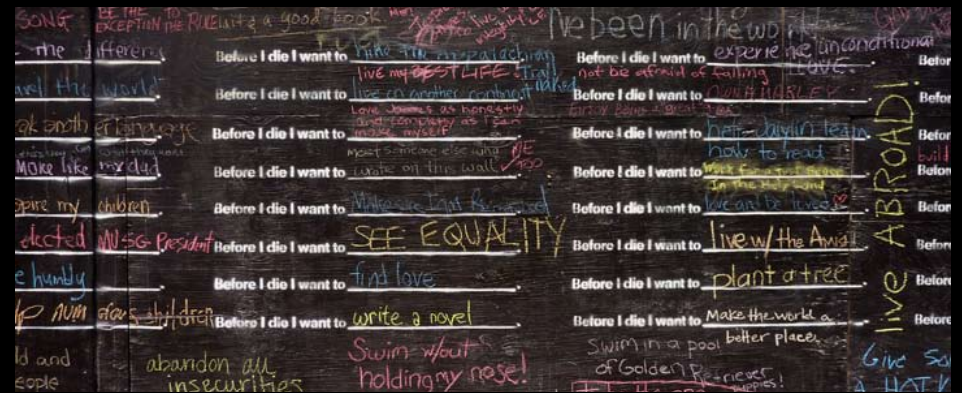
Projects by **Candy Chang**, co-founder of **Civic Center**, a civic design studio in New Orleans

Candy Chang is passionate about public space and the ways we can make it our own. She has worked with street art stickers, fill-in-the-blank post-it notes, temporary sidewalk stencils and and community chalkboards, all of them community activators to provide cheap and flexible platforms of communication. The following selection of projects are a fantastic example of direct and quickly implementable public installations in which existing resources, people, and energy can come together in new and empowering ways.



BEFORE I DIE

With help from friends and neighbors, I turned the side of an abandoned house in my neighborhood into a giant chalkboard to invite people to share what is important to them. "Before I Die" transforms a neglected space at the corner of Marigny and Burgundy in New Orleans into a constructive one where we can learn the hopes and aspirations of the people around us. I believe the design of our public spaces can better reflect what's important to us as residents and as human beings. The responses and stories from passersby while we were installing it have already hit me hard in the heart. Once the wall is filled, we wash the board with water and start with a clean slate again. We are documenting all responses and some will be included in a book.



I WISH THIS WAS

Many cities are full of vacant storefronts and people who need things. My New Orleans neighborhood is still without a full-service grocery store. What if residents could influence the types of stores and services that enter their neighborhood? So I made these fill-in-the-blank stickers to provide an easy tool to voice what we want, where we want it. Just fill them out and put them on abandoned buildings and beyond. The stickers are vinyl and they can be easily removed without damaging property. It's a fun, low-barrier tool for citizens to provide civic input on-site, and the responses reflect the hopes, dreams, and colorful imaginations of different neighborhoods.

This project launched in New Orleans with support from the Ethnographic Terminalia exhibit Nov-Dec 2010 at Du Moix Gallery. Thousands of free stickers were available in corner stores, cafes, bookstores, bars, hair salons, and other places around the city. Grids of blank stickers and a permanent marker were also (and still are) posted on vacant storefronts to invite passersby to write their thoughts. These vinyl stickers will ensure that future business owners can easily remove them without leaving a mark like the residue of DIY paper stickers. Since May 2011, I've returned to the original stickers I began with, so they are fade-resistant high-gloss with a back slit for easy, on-the-go peeling.



CAREER PATH

Turku, Finland is the 2011 European Capital of Culture and as part of their programs Flux Aura and Artist as Neighbour, I was invited to create a public art project in a residential area. Near the University of Turku is a pedestrian/bike path nicknamed Uraputki, or "Career Path," because it is a popular route that students take from their residences to the university. To remind students of the larger picture, this project transforms the "career path" into an interactive space with fill-in-the-blank sentences stenciled on the pavement that say "When I was little I wanted to be _____. Today I want to be _____" in Finnish, Swedish, and English. Passersby can use colored chalk to write directly on the pavement and reflect upon their larger life choices, as well as learn about the lives and goals of the people around them. The project is created with temporary spray chalk so it will fade with the weather and foot traffic.

This project is about comparing yourself today and when you were young, reflecting on how you've changed or stayed the same, and thinking about the desires you had as a child when money was no object. The path has a constant flow of pedestrians and bikers and almost all the response spaces were already filled by the time we finished installing it. Some favorites: "When I was little I wanted to be a princess. Today I want to be an electrician." "When I was little I wanted to be a bird. Today I want to be a speech therapist." "When I was little I wanted to be a grown-up. Today I want to be a kid." Sun and rain erase the responses and the installation starts again.



HYPOTHETICAL DEVELOPMENT

I've been working with the good people of Hypothetical Development, who had a great public art idea: to create signs depicting fanciful futures for neglected buildings in New Orleans. The large 3 feet x 5 feet renderings, created by different artists, will be posted directly onto the buildings they depict. They pose playful visions of fantastic futures and turn public space into fun brainstorming sessions for urban planning. They're like real estate signs in the spirit of Archigram!

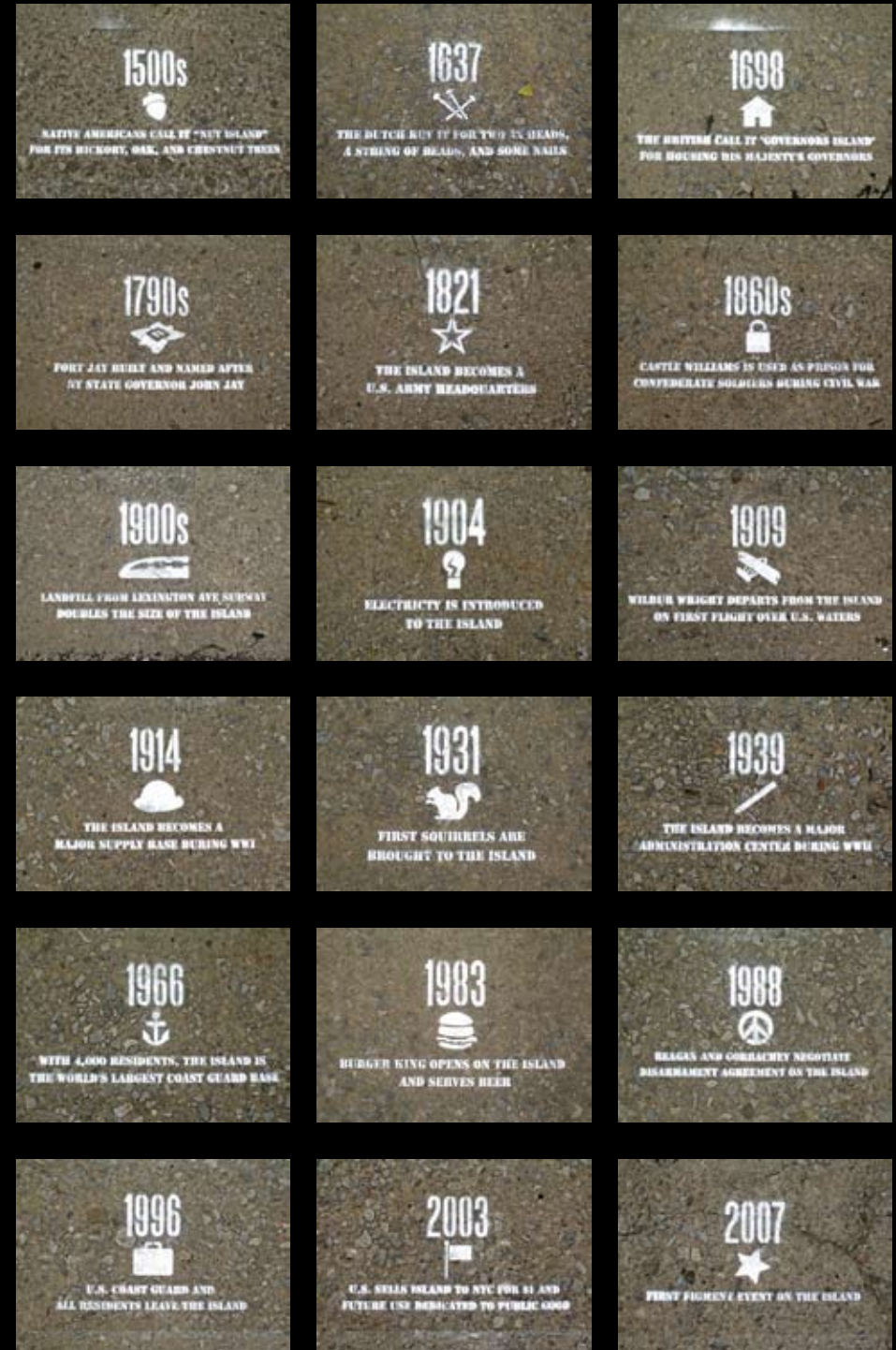
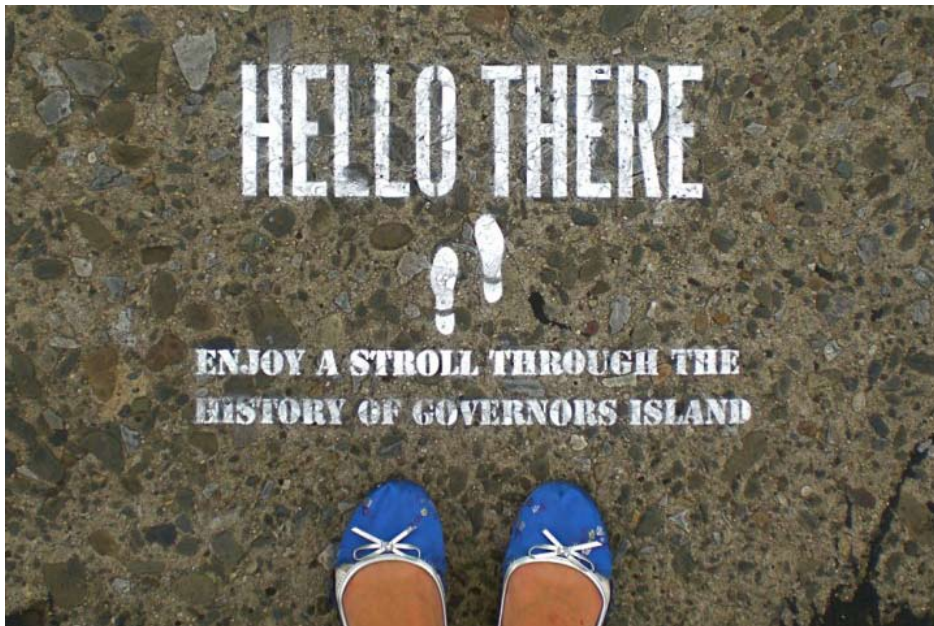
To reference my neighborhood's need for affordable fresh groceries and to pay homage to Mr. Okra, I reimagined a local vacant storefront and made this collage where food trucks turn into fresh produce fountains while friends and lovers sit on giant carrots. No fresh produce, meat, or seafood in your neighborhood? No problem. The Mobile Cornucopia will come to you and provide a never-ending flow of fresh local fare. Take the food truck escalator to food truck heaven, and enjoy the revelries surrounding this daily hub for grub. We'll have so much produce we can use it as furniture!

The first batch of signs have been installed around the city. A Preview Party was held Dec 2010 in the secret loft in Beckham's Book Shop, and Du Mois Gallery hosted a full exhibit in April 2011. While making the collage, I was so very happy to add the army of carrot benches, which was inspired by one of my favorite public spaces in front of the Blue Mosque in Istanbul.



PEDESTRIAN TIMELINE

Did you know squirrels didn't arrive on Governors Island until 1931? That's right. To bring local history to the streets, I stenciled 20 landmark events in the history of Governors Island along the sidewalk. From a bucolic nutfest to a military base to a future public park, the mysterious island just south of Manhattan has gone through a lot. As visitors walk along the path, they can easily get their learn on about the local area while enjoying a leisurely stroll. Created with temporary spray-chalk, the Pedestrian Timeline was part of the Figment public art event on Governors Island in June 2008. Approximately 300 feet long.



1000 Hour Exposures

Andrew Clark interviews photographer Michael Chrisman



AC: The focus of our fall issue is SPEED, and we were intrigued by your project, “1000 Hour Exposures.” How long have you been taking photographs, and what was the instigation for this project?

MC: I've been taking photographs for the better part of my life, sometimes seriously, often not. Time is always a major component with photography, but usually we deal in fractions of a second. Exploring the limits of the medium is part of what drew me to this project.

AC: How would you describe your project? What are you exploring with these pictures and this method?

MC: These 1000-hour long exposures represent other metrics, as well. Not only are they a thousand hours, but within the photo might be the memory of half a million cars, thousands of tons of coal, or hundreds of dumpsters of garbage. Time isn't the only thing being measured in the photos, but the other metrics are obscured by time.

AC: The pinhole camera dates as far back as the 4th century BC and is a technology that hasn't really changed since then. What drew you to such a simple technology and process?

MC: The pinhole camera is still the most reliable and cost-effective way of capturing these photos. They are durable, inexpensive to build and maintain, lightweight and require no external power. Its simplicity makes it ideal.

AC: What is your typical method/process for setting up these ‘black boxes’?

MC: With no viewfinder, it can be difficult to frame the shot. I designed the cameras so that their field of view is approximately that of our own vision. Each camera has to be temporarily mounted to something that won't move for 1000 hours. I found early on that quality tape, and some hard learned lessons on how best to use it, was my best bet.

AC: Do you have any ground rules? Any run-ins with bystanders, owners or enforcement officers?

MC: I can justify mounting my cameras to public or private property temporarily, as long as I don't damage it in any way. The cameras look suspicious enough that I don't mount them to bridges or any major infrastructure.

Bystanders are often curious; the ones who ask about what I'm doing are generally pretty excited about the project and I'll offer to email the final result when it's all done. The ones who don't ask are the ones more likely to remove the camera once I leave. As I've become more brazen with regard to installing them in more public or more populated areas, more and more cameras have gone missing.

AC: Have you refined your technique, construction and/or placement over the course of the project?

MC: The project is always being refined. It is a constant experiment, and with each test taking 1000 hours, a very slow experiment. There were half a dozen prototypes before I constructed the 16 cameras I'm using for the current series. Despite the camera's simplicity, the photos don't always turn out. There are many ways for them to fail, and sometimes they simply don't look very nice.

AC: Today's culture is driven with the behavior of instantaneous photo capture, tag, display and share. How does your project fit within this context?

MC: It is such a slow process that the best thing I can do is forget about the cameras so I don't obsess about them. I have to mark down the date to retrieve the cameras on a calendar. In the end, though, they are all still just images. The process behind it can deepen the interest in the work, but they still have to stand up on their own visually.

AC: Do you see this project operating in the background of your work for years to come?

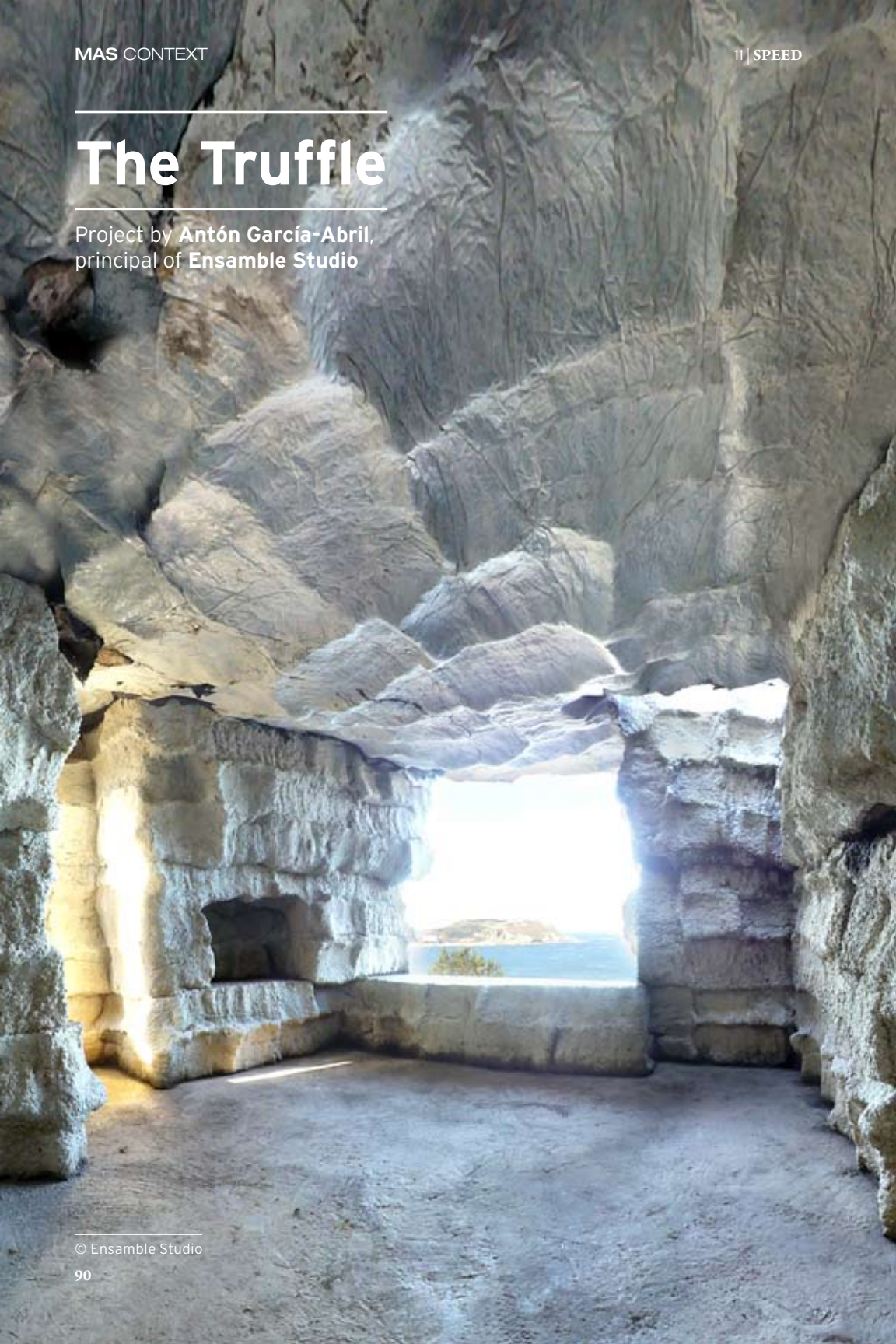
MC: Certainly. This type of project is much less serious than most of my other photographs. It is a fun, exciting, messy project. The film gets wrinkled, tape melts, and there are so many things outside of my control. It is a far cry from the clean, precise aspects of my typical work; it provides balance.



Harbour
© Michael Chrisman

The Truffle

Project by **Antón García-Abril**,
principal of **Ensamble Studio**



The Truffle is a piece of nature built with earth, full of air. A space within a stone that sits on the ground and blends with the territory. It camouflages, by emulating the processes of mineral formation in its structure, and integrates with the natural environment, complying with its laws.

We made a hole in the ground, piling up on its perimeter the topsoil removed, and we obtained a retaining dike without mechanical consistency. Then we materialized the air, building a volume with hay bales and flooded the space between the earth and the built air to solidify it. The poured mass concrete wrapped the air and protected itself with the ground. Time passed and we removed the earth, discovering an amorphous mass.

The earth and the concrete exchanged their properties. The land provided the concrete with its texture and color, its form and its essence, and concrete gave the earth its strength and internal structure. But what we had created was not yet architecture; we had fabricated a stone.

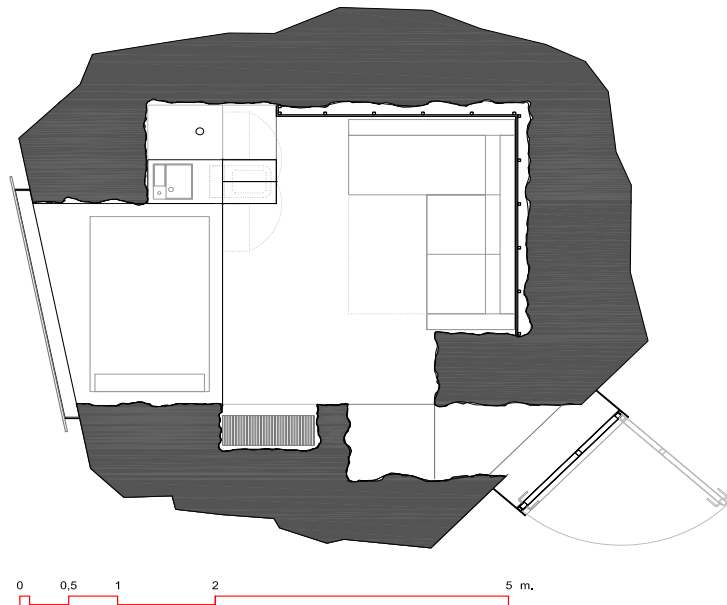
We made a few cuts using quarry machinery to explore its core and discovered its mass inside built with hay, now compressed by the hydrostatic pressure exerted by concrete on the flimsy vegetable structure. To empty the interior, the calf Paulina arrived, and enjoyed the 50m³ of the nicest food, from which she nourished for a year until she left her habitat, already as an adult and weighing 300 kilos. She



had eaten the interior volume, and space appeared for the first time, restoring the architectural condition of the truffle after having been a shelter for the animal and the vegetable mass for a long time.

The architecture surprised us. Its ambiguity between the natural and the built, the complex materiality that the same constructive element, the mass unreinforced concrete, could provide the small architectural space, at different scales, from the amorphous texture of its exterior, to the violent incision of a cut that reveals its architectural vocation leading to the fluid expression of the interior solidification of concrete. This dense materiality, which gives the vertical walls a rusticated scale, comes from the size of the bales, and contrasts with the continuous liquidity of the ceiling that evokes the sea, petrified in the lintel of the spatial frame that looks sublimely to the Atlantic Ocean, highlighting the horizon as the only tense line within the interior space.

To provide the space with all the comfort and the living conditions needed in architecture, we took the "Cabanon" of Le Corbusier as motif, recreating its program and dimensions. It is the "Cabanon of Beton," the reference that makes the truffle an enjoyable living space in nature, that has inspired and subdued us. And the lesson we learn is the uncertainty that led us in the desire to build with our own hands, a piece of nature, a contemplative space, a little poem.



Above: The Truffle construction process. Left: Plan © Ensemble Studio

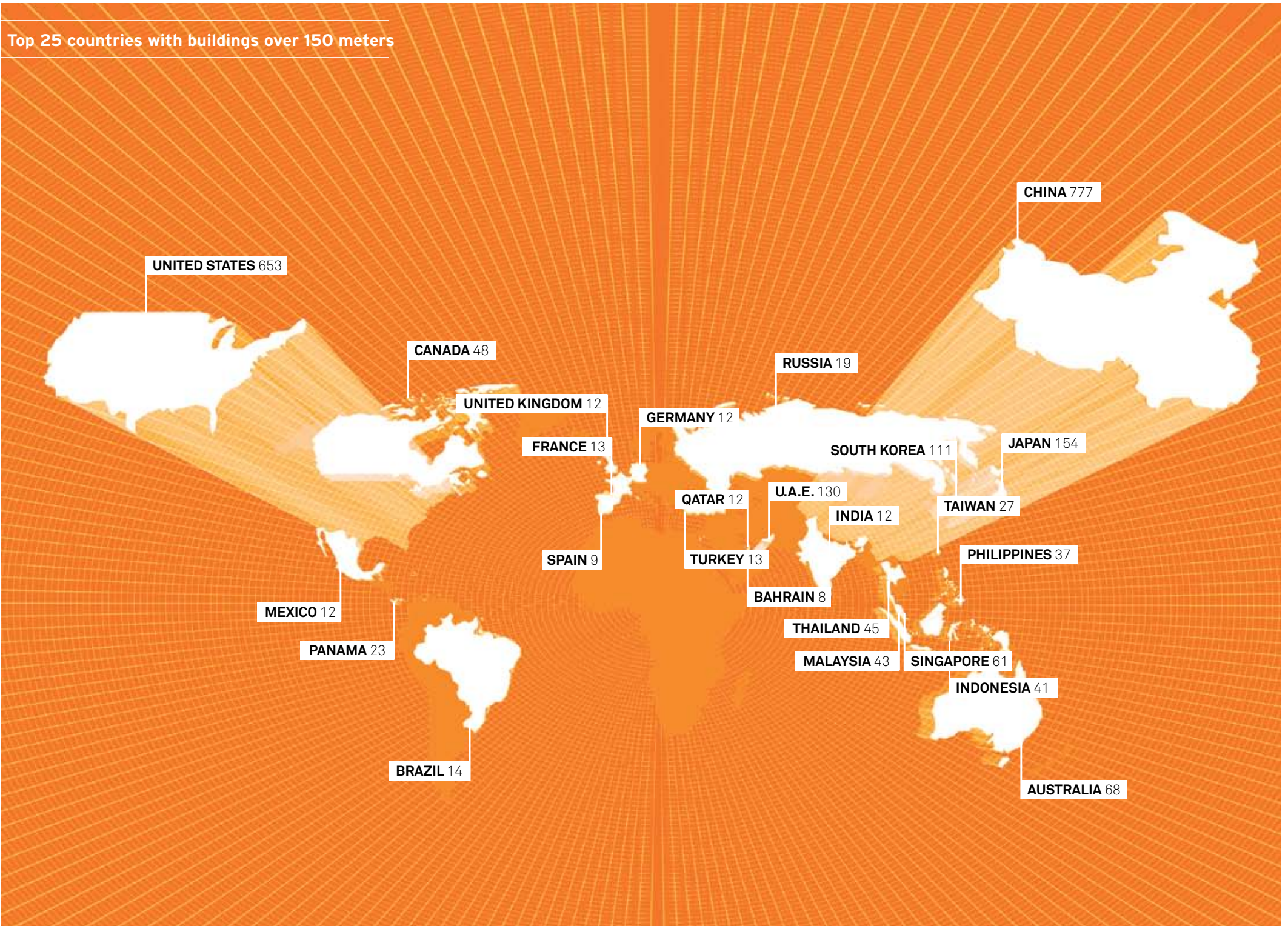


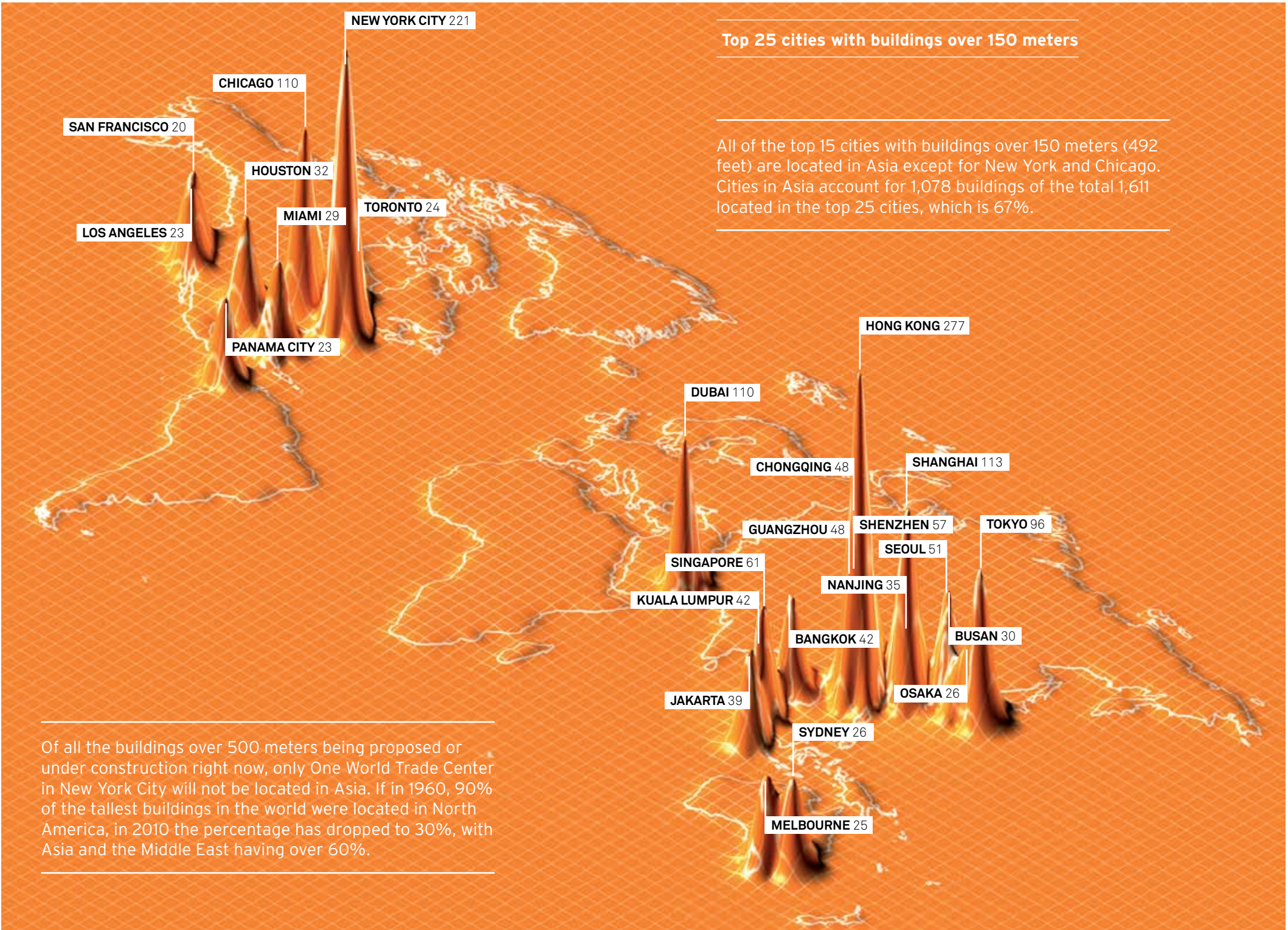
Race to Build

Diagrams by **Iker Gil** and **André Corrêa**

The race to build the tallest building in the world has been going on ever since the first skyscraper, the Home Insurance Building, was built in Chicago in 1885 (it was demolished in 1931). The Empire State Building was the first building to have more than 100 floors and the tallest building in the world until 1973 when it was surpassed by the World Trade Center. Willis Tower (then Sears Tower), Petronas Twin Towers and Taipei 101 followed. At 828 meters or 2,717 feet, Burj Khalifa is the tallest building in the world, but according to recent news, it might not be long until it gets surpassed. Kingdom Tower, the proposed building in Jeddah, Saudi Arabia, is expected to reach 1,000 meters (3281 feet) by the time it is completed in 2017. Iker Gil and André Corrêa dig in the archives of the Council on Tall Buildings and Urban Habitat to visualize the new current situation around the world and trends during the last 100 years.

Top 25 countries with buildings over 150 meters

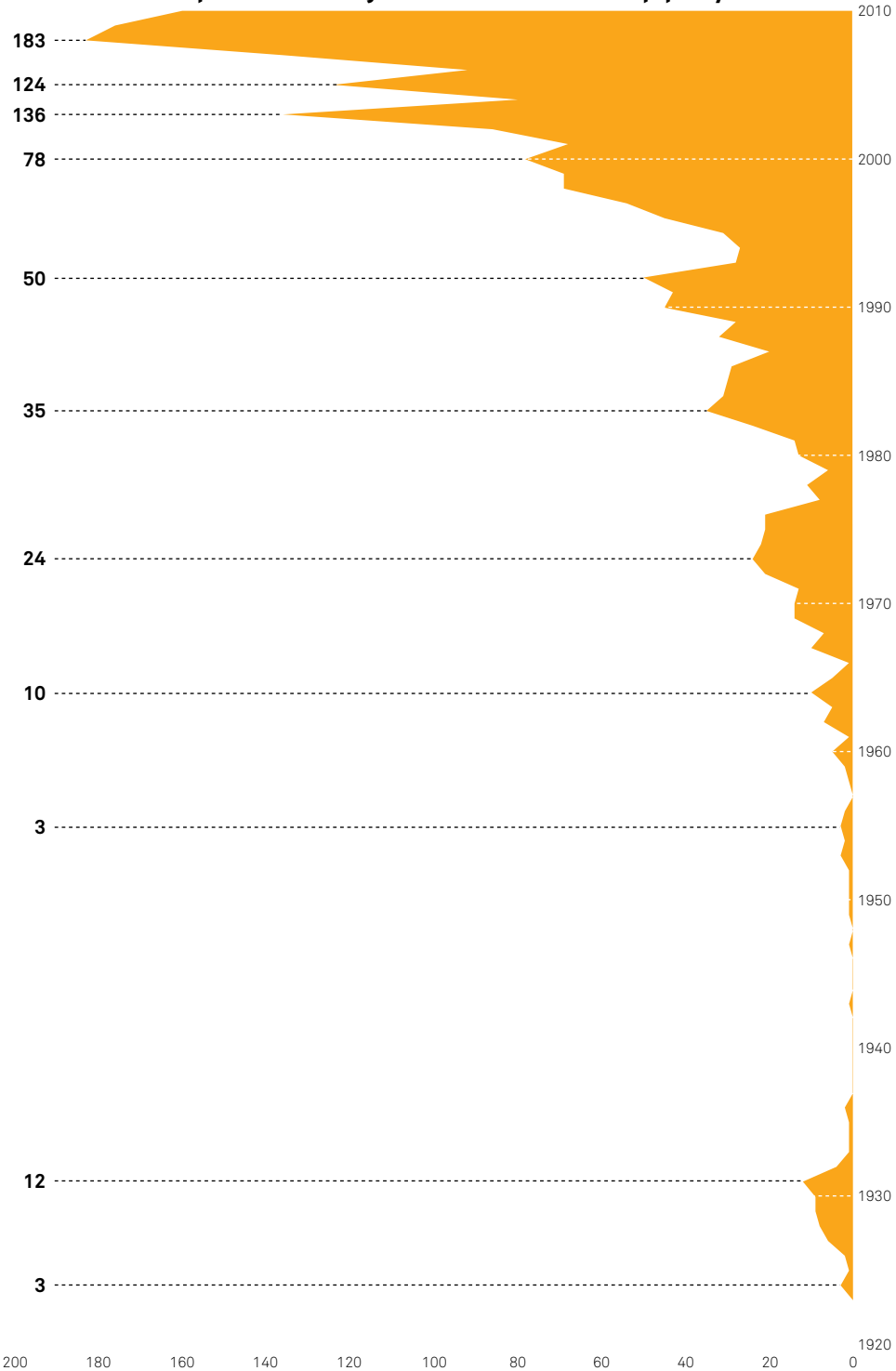




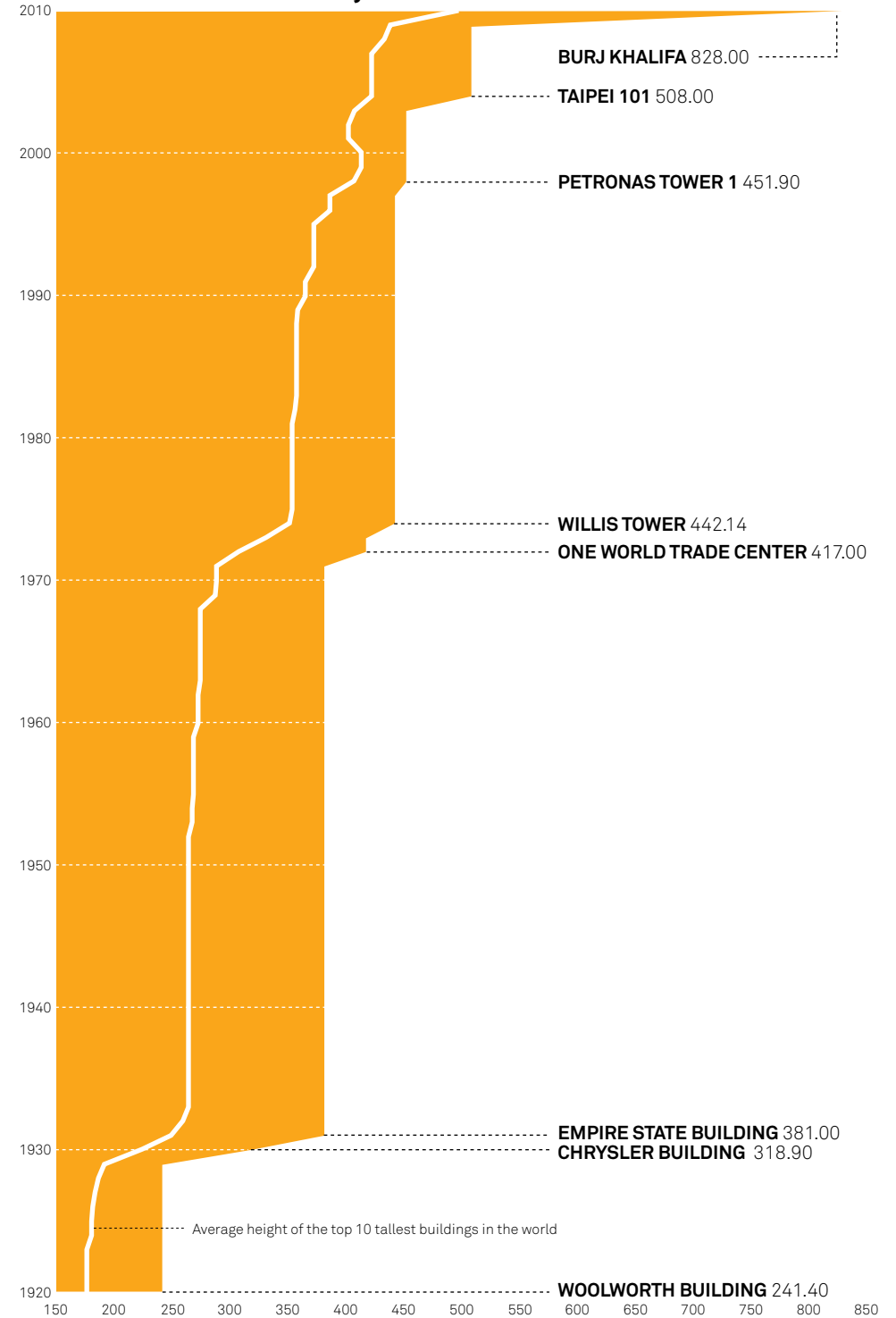
All of the top 15 cities with buildings over 150 meters (492 feet) are located in Asia except for New York and Chicago. Cities in Asia account for 1,078 buildings of the total 1,611 located in the top 25 cities, which is 67%.

Of all the buildings over 500 meters being proposed or under construction right now, only One World Trade Center in New York City will not be located in Asia. If in 1960, 90% of the tallest buildings in the world were located in North America, in 2010 the percentage has dropped to 30%, with Asia and the Middle East having over 60%.

Number of completed buildings of 150 meters and up per year.



List of the tallest buildings in the world



On the Quickening of History

Essay by **Brendan Crain**, founder of the **Where** blog and Program Coordinator for the **Institute for Urban Design**



Museum Without Walls app that gives you instant access to the thousands of pieces of public art and architecture you'll find on our website, plus tour routes, historical info, and analysis.
© cultureNOW

If it is less artful for the change, storytelling is more potent as it becomes more democratic. History, once written by the victors to be recited and accepted as inerrant fact by schoolchildren, is more contested today as individual accounts color public perception of events. This changes the very pace of how history is made and, inherently, how it is remembered. In cities, this necessitates a radical shift in how we think about preservation. Traditionally, we preserve pieces of the built environment in order to slow the process of loss, but buildings are static proxies for the dynamic people who built and occupied them, and the social histories of these places are often lost. Indeed, the current debate around preservation seems largely preoccupied with the question of whether or not the whole operation has gotten out of hand, watered down by a reactionary attitude toward change and a purely aesthetic understanding of the urban condition.

If architectural preservation has long been limited by the difficulty of attaching meaningful social narratives to physical structures, new tech is creating exciting possibilities for reinvigorating the practice. Already, we are using digital databases and mobile apps to augment the contemporary cityscape. CultureNOW's Museum Without Walls app features thousands of geo-tagged sites in dozens of cities, allowing users to learn about historical and cultural sites of interest as they move through the city. In London, apps like Historypin and the Museum of London's StreetMuseum allow users to hold their phone up to view historic images layered over the contemporary cityscape. Tools like these allow for the communication of past uses and conditions in ways that preservationists could have only dreamed of a decade ago.

The creation of more tools for sharing historical information, though, has coincided with an even more dramatic spike in the number of people doing the sharing. Thanks to the rapid rise of the smartphone over the past four years, you can take the world with you wherever you go. We're learning newer and faster ways of communicating our own stories at the same time that we're being exposed to an evermore diverse array of viewpoints. We weave each other's narratives, built across multiple platforms, into our own. Curation used to be something that we left to people in museums, but in an info-rich, globalized urban society, to exist is to curate. The records that we create as we log our reactions to current events could some day be layered onto the physical places in which those events took

place, creating an in-situ record of not just what happened, but how that happening was interpreted from various vantage points. This is a boon to preservationists, as people can sympathize much more deeply with human narratives than glass and stone facades or any bronze plaques that may adorn them. Preservation of the built environment is, ultimately, a slowing of loss; digital layers can aid greatly in this endeavor by maintaining a sense of urgency around long-passed events that lend the built environment much of its import.

Of course, these new layers of information also complicate the practice of historic preservation. Intangible as they may be, mobile apps like Layar and Junaio are fundamentally changing the way that people interact with the world around them, meaning that the platforms themselves are becoming important features of the cityscape — and these are just the first salvo, the Pong- or Frogger-level iterations of augmented reality apps. These applications will eventually be used not just to find a good place for Thai food or to see where a bus route leads, but to interpret and alter the physical realm, as well. As augmented reality applications become increasingly ubiquitous, it will become impossible to separate the city from its digital self. This means that, in the not too distant future, digital layers will need to be thought of by preservationists in much the same way that buildings are today. And while it's true that digital preservation is already a subject of discussion, that discussion is currently focused on the use of digital tools to preserve the physical world, or to preserve artistic or cultural projects that were created on digital platforms. The preservation of the platforms themselves is largely uncharted territory, regardless of the outsized impact that they have had on our lives.

The tricky thing about digital versions of the urban environment is that, unlike buildings, they don't ever actually disappear. Even if you delete something online, it exists somewhere in the electronic ether, a string of zeroes and ones just waiting to be discovered by some digital anthropologist a few decades hence. Unlike the preservation of the physical city, which is focused on stemming the loss of limited historic building stock, the preservation of the digital city will require the parsing of a near-limitless flow of information generated across thousands (if not millions) of applications. In the digital realm, preservation becomes promotion, and this raises some thorny questions. For instance: When we are talking about preserving particular versions of a city, which ones become canonical? Layar's version of

New York in 2011 is almost certainly different, however slightly, from Junaio's, and in 2061, many imitators will have come and gone — indeed, Layar and/or Junaio could easily disappear in the interim. Preservationists concerned with the digital cityscape will need to determine which layers from which apps are the most useful, or accurate, or interesting.

If you scoff at the idea that someone would want to view a long-outdated version of the city, just imagine if it were possible, while wandering the likes of Bleecker or MacDougal Streets in New York City, to pull up a layer on your phone that immersed you in the Greenwich Village of the 1950s, complete with William Faulkner's Yelp reviews of several of his favorite bars (some still in operation), or a YouTube video of Bob Dylan humming through "Blowin' in the Wind" in fits and starts as he wrote it in the back room of the Fat Black Pussycat. This raises yet another question in regards to the preservation of the digital city: which version of these versions that we are preserving is most important to preserve? You would be hard-pressed to find someone who would argue that the Greenwich Village of 2011 is as important to pass on to future generations as the Greenwich Village of 1953. Since history never stops being made, there will never be enough time or energy to preserve (promote) everything. Selective forgetfulness is a fundamental necessity in a digitally-augmented world.

Physical places, particularly those of the densely-populated, urban variety, are now so richly infused with conflicting narratives that their immediate history (what has happened in the past two weeks) is just as important as their distant history (what has happened in the past two hundred years). The stories of mis- and/or under-represented minority groups that might have been swept under the rug in the past can now be tagged directly to the places in which they occurred. Digital layers even have the potential to make preservation into a more participatory process by allowing people to build robust narratives that root them to their physical communities in ways that are harder to erase. The incorporation of proactive digital tactics could dramatically broaden support for the preservation movement. Positing storytelling that is both artful and democratic as a principal goal for the historic preservation movement in an augmented world, the need for the legitimization of the digital cityscape, so integral to the sustenance of the physical, is both immediate and vital. As history speeds up, we must consider the preservation of all things present, for tomorrow, they will be long past.

Looking For A Theory Of Real-Time Knowledge

Essay by **Troy Conrad Therrien**, founding partner in the creative curatorial agency **Th-ey**, and Chief Architect, Cloud Communication at Columbia University's GSAPP



Whether in streams, flows or feeds, the message latent in the contemporary ubiquity of dashboards, decks, and push notifications appears unequivocal: the only time today is real-time. Or to put it another way, time has, finally, become real. Rather than empty and calendrical, the sands of the hourglass that govern our activities, interests and encounters appear to have been materialized into the material – albeit only marginally – bits and bytes of information flows. This, of course, has been prophesied for some time. The difference today is that the deluge has become explicit, undeniable, and ominous. It has arrived.

The contemporary informational sublime is not only sequestered to early adapting tweeting, tumbling, liking and circling tweens. These new media that provide channels full of noise are nonetheless similarly the communication apparatuses that have begun to be the de facto platforms for all political, economic and social exchange. It is growing increasingly more difficult to insulate oneself from the buzz of the billion — and steadily increasing — daily tweets or the four billion — and steadily increasing — facebook interactions per day. Whether in the collective collateral form of an information ticker at the bottom of the 24-hour news channel or in the individual curated form of the carefully manicured streams we stay glued to through mobile devices like prosthetics replacing phantom limbs that never existed, the passage of time can be said to be measurable through the constant information stream of updates we parse, edit and, increasingly less so, process.

This rough sketch of what has become a banal truism leads us, by corollary, to a more serious matter. In addition to being global, social, ubiquitous and cheap — the four-part mantra of information theorist Clay Shirky — information today is likewise fast, very fast. To risk the serious question, what are the stakes for knowledge in this environment?

Perhaps not historically true, in modernity, though, knowledge is not identical to information. However specious through a contemporary lens, its notion of progress, the monotonic accumulation of knowledge over time, lends a distinction. Knowledge being the remainder when the needles of truth were mined from the haystacks of empirical detritus, held up to the light, passed around, and agreed to be without defect, progress was the growing stack of needles. Putting aside the ideological implications and compulsions of progress, this

mechanical metaphor leaves us with a distinction born of the input/output ratio — much information goes in, spurts of knowledge come out — while it somewhat obfuscates another fundamental difference, and thereby its consequence: information was certain. The more time we spent collecting it, the more we had. Knowledge was not. It was contingent, subject to chance alignments, breakthroughs and moments of clarity. A more banal, yet operative, distinction is the result: information was fast, knowledge was slow. Not simply a by-product, the speed differential was structural. Progress progressed necessarily on the backs of bouts of endurance with testing, verification, and falsification. It was not only characterized by but also propelled methodologically and ideologically by its laboriousness, the very longness and slowness of its march.

Fine for modernity, but does this incommensurate pacing still hold? Or more instructively, what if it does not? What if the apparatuses of our information age that provide for real-time information transfer can likewise accelerate the production of knowledge? That is, what if they are able to close the gap between the time it takes to disseminate the documentation of observations and the time it takes to parse these into principles and relationships? Recent history offers little purchase. Even as progress has become somewhat of a cuss word in academia since the mid-twentieth century, there is still a lack of an Einsteinian theory of knowledge, a theory of knowledge at great speed. Such a theory is well beyond the potential ambit and actual ambition of the current text. Where might such a theory — a theory of real-time knowledge — be found, and why has it yet to surface?

Being at once the house of theory and the house of knowledge, the university would be the obvious place to begin regarding the former. Yet it leads us first to the latter, for it is precisely the university that is the institution most threatened by the possibility of real-time knowledge. Indeed, the university was founded precisely to divorce knowledge from both time and reality. Originally, it provided the structure to divorce the scholar from the world, from the instability of everyday life, wherein “the sleep of reasons produces monsters”. More recently, it has served the role of buffering the temporality of the market that requires a timely return on its investment.

The former dislocation dates back to the founding of the first university in Paris in the 12th century. “The freedom of wandering is divided into two,” wrote Stephen of Tournai, an early influence

and theorist of the university, “the movement of the body through different places and the movement of the mind through different images. The curious wander with their eyes going from place to place, kingdom to kingdom, city to city, province to province... Those fickle and unstable in mind also wander... This freedom of wandering in the mind through different images tires and impedes scholars in their studies and the cloistered in their prayers.” Which is to say, as Mark Wigley has argued, the university was thus an attempt to resist “the ‘wandering mind’ before actual buildings are constructed to resist the “wandering body”. Before there was even a wall erected between the city and the scholar, the imaginary architecture of the university separated the scholar from the rhythms, needs and perturbations of real-time.

Separation from the market is registered in the late 18th century in Jean-Francois Lyotard’s history, wherein industry entered into a positive feedback loop with scientific knowledge. Not only did industry begin to rely upon the techno-scientific advancements of research, the university itself became dependent on financing from industry. In Lyotard’s words, “no technology without wealth, but no wealth without technology.” In order to reintroduce distance in this relationship of uneasy proximity, industry began to fund private research institutions, which could then themselves fund the universities. This separation freed universities to research without necessitating immediate returns, a mechanics underwritten by “the theory that research must be financed at a loss for certain length of time in order to increase the probability of its yielding a decisive, and therefore highly profitable, innovation.” That is, the separation of the university from the market, from real-time, was itself a market strategy.

So then, where to look? Lyotard’s history is in support of a theory of modernity governed by legitimation in the form of performativity. The union between knowledge production and the production of capital hinged on the idea that there was a stable relationship between the input of resources into the former — the university — and outputs generated for the latter — industry. The market-driven modern condition was thus a break in the classical mode of knowledge production: “scientists, technicians, and instruments are purchased not to find truth, but to augment power.” The Postmodern Condition, then, the title of the text and the stakes for Lyotard writing at the end of the 1970s, was framed as yet another break in the ends or “legitimation”

of knowledge. By this time, Lyotard claims, the modern relationship between industry and research had expired. Whereas industry once looked to experts to provide a “scientific secret,” to produce proprietary knowledge unavailable to competitors, the post-modern condition is rather a “game of perfect information.” In such a game, extra performativity, extra production, does not come from producing new knowledge, but rather from “arranging the data in a new way,” from separating and recombining data into patterns and trends connecting that which was previously thought to be independent. “This capacity to articulate what used to be separate can be called imagination.” More importantly, “Speed is one of its properties.”

Applying this caveat — speed — to Lyotard’s subsequent claim reveals a previously overlooked prescience in his futurology. Understanding that “computerization” would result in the abstraction of knowledge production away from a traditional mode of accumulation to the re-arranging of pieces of information, it was Lyotard’s plea that information be made free. Whereas the anxiety of this recommendation speaks to the historical moment of his writing, it’s content provides an infrastructure for evaluating the present. “Give the public free access to the memory and data banks,” he recommended, actualizing the game of perfect information. For Lyotard, this sketched “the outline of a politics that would respect both the desire for justice and the desire for the unknown.” Yet, thirty odd years hence, it is precisely through the realization of this type of game that a political economics has developed that undermines both social justice and tolerance for uncertainty.

In the American financial industry, over 70% of market transactions today take the form of high frequency trading (HFT), and the figure is rapidly growing. Rather than trading securities based on the economic fundamentals of the underlying asset or commodity, HFT is a second order operation. It affects a game of perfect information by leveling the field between participants. Often occurring in “dark pools,” proprietary exchanges in which both buyers and sellers are deprived of price information, HFT is driven by computers on hyperfast networks typically located in co-location centers, like the NYSE Euronext exchange in Mahwah, New Jersey where massive server banks are installed in the same location as the exchange server to be leased to trading shops to ensure the highest speed of transaction. Complex algorithms drive thousands of automated trades per second,

putting and canceling orders, re-calibrating, and repeating in order to suss out market value in sophisticated processes of trial and error. In this game of poker, the underlying value of securities dematerialize, giving way to a system that increasingly references itself. The result is a milieu of immediacy in which any kernel of information inputted immediately results in a new state that invalidates the characteristics of the previous state. To put it another way, it is a real-time environment in which the very speed of its apparatus makes it impossible to distinguish between knowledge and information.

Whereas HFT has been around for some time, a more recent financial phenomenon makes use of another type of game of perfect information, precisely the type of game for which Lyotard lobbied. In April of this year, the London-based £25 million Derwent Capital hedge fund launched, using a proprietary program to process the content of millions of daily twitter messages in order to predict the movement of the market. Based on work done by Derwent consultant John Bollen at Indiana University, the seemingly inane stream of consciousness converted into 140 character-long blasts that is the twitter-verse was shown to collectively be able to predict the Dow Jones Industrial Average with 87 percent accuracy. In the fund's press release of May 16, 2011, founder Paul Hawtin is quoted as saying, "For years investors have widely accepted that financial markets are driven by fear and greed, but we've never before had the technology or data to be able to quantify human emotion. This is the 4th dimension." It is precisely because this information is open to the public, because twitter provides for a game of perfect information by way of a contemporary form of a law of large numbers, that this 4th dimension is open to a small minority of wealthy investors. Or, to repurpose Lyotard's words, "no technology without wealth, but no wealth without technology."

Given the recent onslaught of crises toting the adjective "financial," the claim that finance, in part, drives history could perhaps be considered among the least controversial claims of this text. In the context of such a claim, HFT would not simply be a hermetic game played in an isolated house of mirrors, but a real game with real stakes that reach out into the most remote parts of the world. More global, and thereby more troubling, is sentiment-based trading. Using systems programmed by knowledge established in universities to convert a real-time global archive of public information into for

profit transactions, sentiment trading would not only be potentially participating in the writing of history as a result of its fallout, but is precisely a historiographical technology itself. Gathering and parsing millions of statements a day, sentiment tracking could perhaps be described, in the terms of another strain of post-war French thought, as a means by which to draw out the discursive formations of public discussion. Activated in real-time, perhaps we can say that sentiment tracking is thus the actualization of a cocktail of mid-nineteenth and mid-twentieth century fantasies, the conversion of social facts into historical facts in real-time.

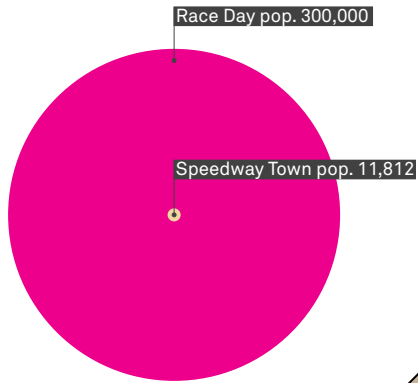
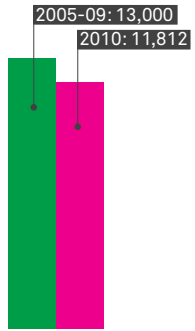
Where as the "avalanche of numbers" of the early nineteenth century in France, or the impossibly long scrolls of imperial accounting that accrued in untouched piles in late nineteenth century Britain, overran the capacity of their receivers to process them, today's technology allows for massive streams of information to become tractable, and thereby useful. The university has not only largely failed to embrace such processing technologies, they are precisely the institutions developed to resist such speed. As such, the epicenter of the production and exploitation of real-time knowledge is not the house of knowledge, but finance. The stakes, and the opportunity, are rendered in high relief when recalling Wigley's alert, now two decades old, that, "the university does not examine the foundation of its own foundation. Its architecture is unstable, necessarily erected over an abyss." Supported by the observation that "the networks of communication have become the new house of theory," Wigley's remarks can be read as an invitation, and an invitation to re-theorize the space in which knowledge is produced. This begs the question: Where to start looking?

Speedway, Indiana

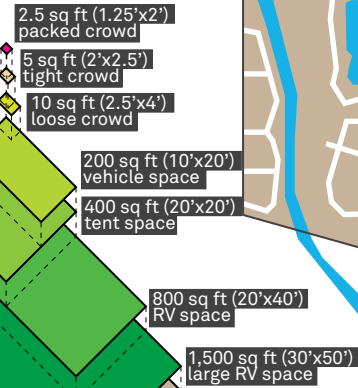
Research and diagrams by **Stephen Killion**

Home of the Indianapolis Motor Speedway, Speedway Town is a small city implanted within the greater metropolitan area of Indianapolis, IN. Every year during Memorial Day weekend, the city grows over 25 times in population in order to attend the Indy 500, considered to be "the greatest spectacle in racing."

Population Change

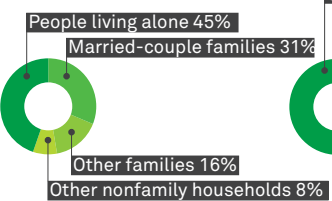


Distribution of Space

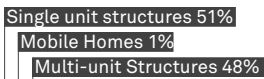


Types of Households in Speedway

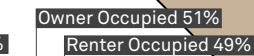
Total Occupied Housing Units - 6,300
Vacant Housing Units - 900



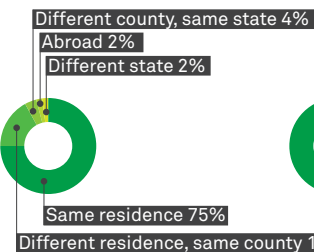
Occupied Housing Units



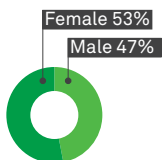
Housing Unit Characteristics



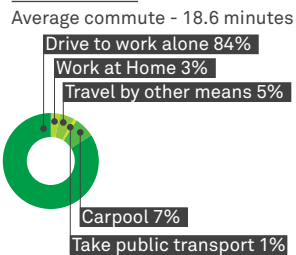
Geographic Mobility of Residents



Population Gender



Travel To Work



Population

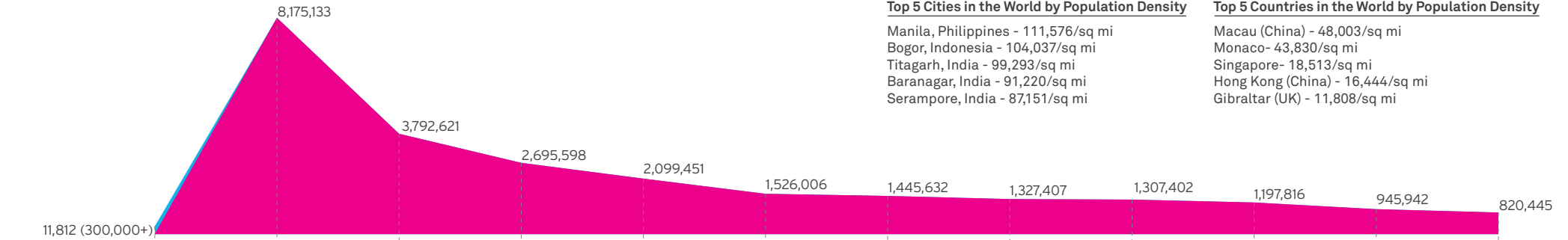
Speedway Town, Indiana compared to the 10 most populous US cities.

Top 5 Cities in the World by Population Density

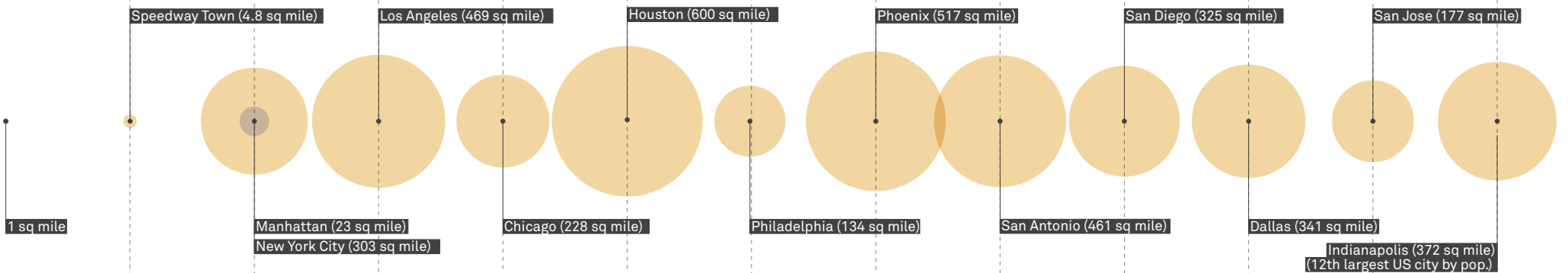
- Manila, Philippines - 111,576/sq mi
- Bogor, Indonesia - 104,037/sq mi
- Titagarh, India - 99,293/sq mi
- Baranagar, India - 91,220/sq mi
- Serampore, India - 87,151/sq mi

Top 5 Countries in the World by Population Density

- Macau (China) - 48,003/sq mi
- Monaco - 43,830/sq mi
- Singapore - 18,513/sq mi
- Hong Kong (China) - 16,444/sq mi
- Gibraltar (UK) - 11,808/sq mi

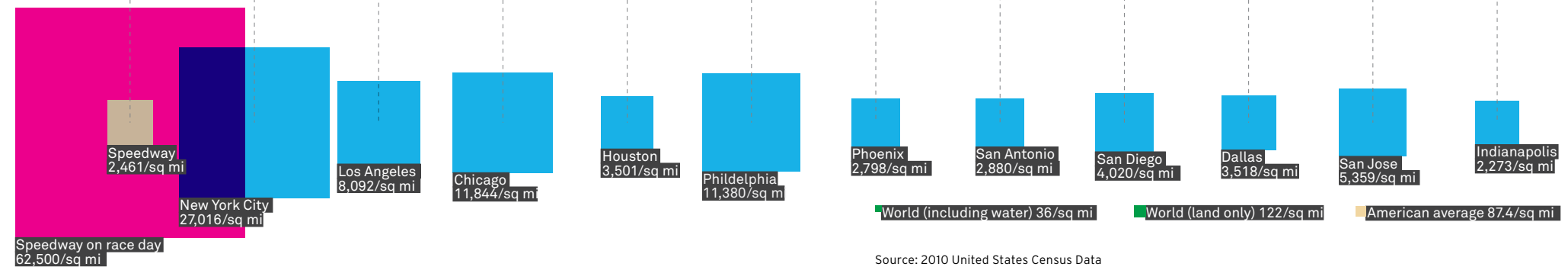


Area



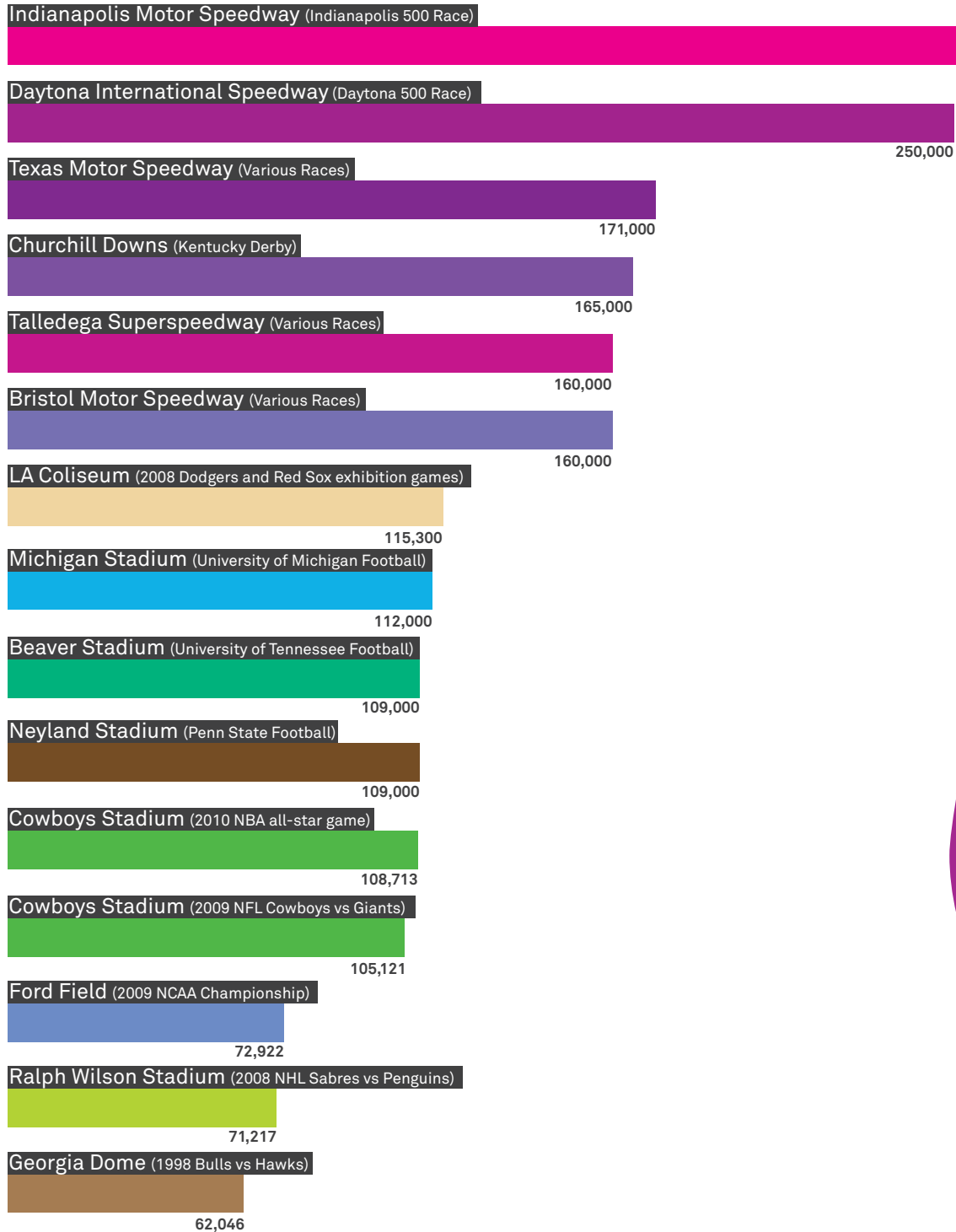
Population Density

On Race Weekend, Speedway Indiana is the 20th densest city in the world.

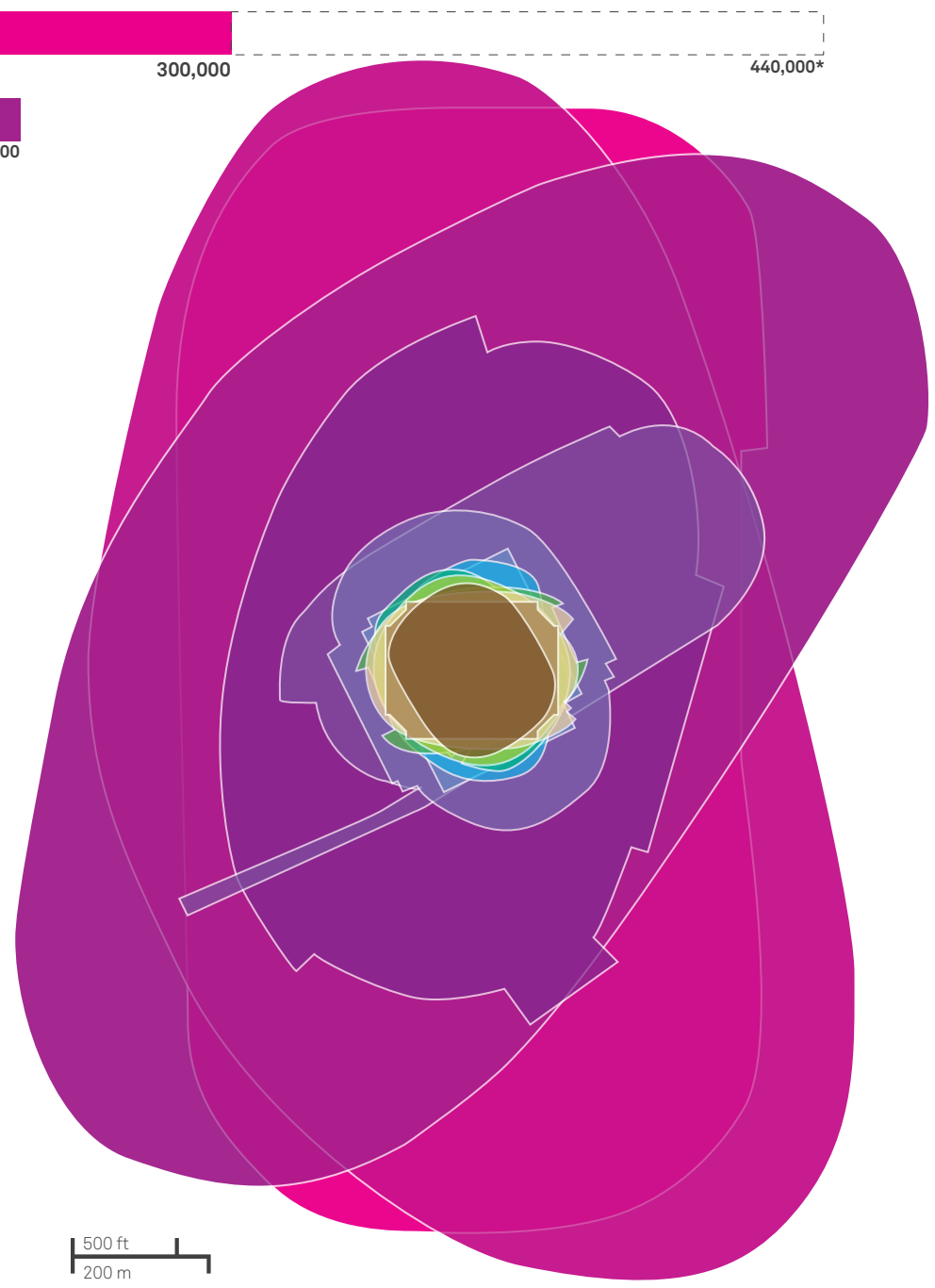


Source: 2010 United States Census Data

Largest Attendance for Sporting Events



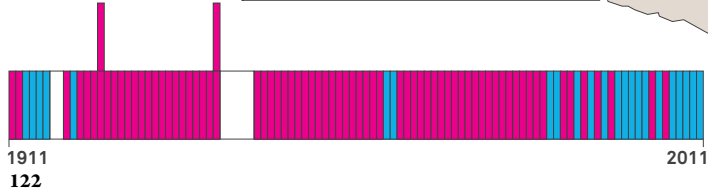
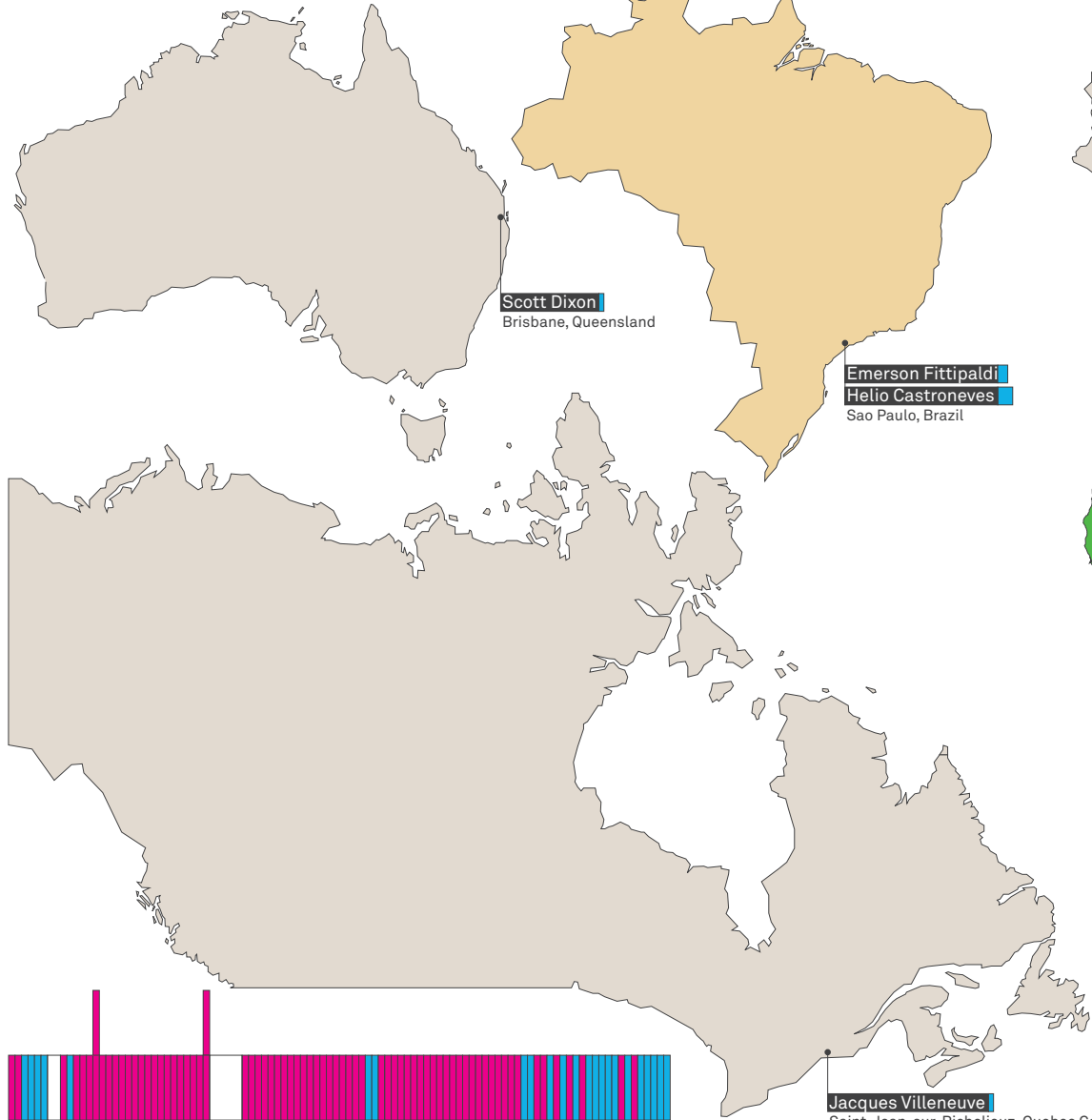
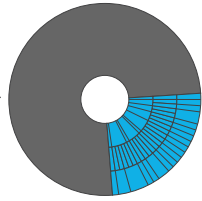
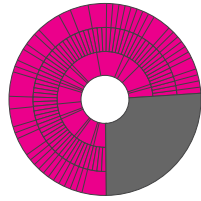
Area Outlines of Sports Venues



*speculated capacity limit of infield lawn and bleacher seating (257,325 seats)
 Source: Yahoo! Sports, Google Maps

Birthplaces of Indianapolis 500 Winners

97 wins by 67 drivers from 11 countries



- Jim Clark**
Kilmarnock, Scotland
- Dario Franchitti**
Kilmarnock, Scotland
- George Robson**
Newcastle-On-Tyne, England
- Graham Hill**
London, England
- Dan Wheldon**
Emberton, England

- Gil de Ferran**
Paris, France
- Rene Thomas**
Paris, France
- Jules Goux**
Paris, France
- Gaston Chevrolet**
Beaune, France

- Arie Luyendyk**
Sommelsdijk, Netherlands

- Dario Resta**
Milan, Italy
- Ralph DePalma**
Biccari, Italy
- Mario Andretti**
Montona, Italy

- Kenny Brack**
Karlstad, Sweden

- Scott Dixon**
Brisbane, Queensland
- Emerson Fittipaldi**
Sao Paulo, Brazil
- Helio Castroneves**
Sao Paulo, Brazil

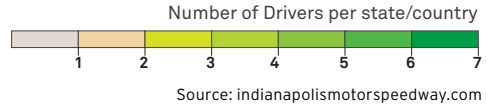
- Floyd Roberts**
Jamestown, North Dakota
- Tommy Milton**
St. Paul, Minnesota
- Floyd Davis**
Springfield, Illinois
- Billy Arnold**
Chicago, Illinois
- Gordon Johncock**
Hastings, Michigan
- Joe Boyer**
Detroit, Michigan
- Ray Harroun**
Spartansburg, Pennsylvania
- Ray Keech**
Coatesville, Pennsylvania
- Lee Wallard**
Schenectady, New York

- Tom Sheva**
Spokane, Washington
- Jimmy Bryan**
Phoenix, Arizona
- Eddie Cheever Jr.**
Phoenix, Arizona
- Buddy Rice**
Vail, Colorado
- Buddy Lazier**
Vail, Colorado
- Bobby Unser**
Colorado Springs, Colorado

- Johnnie Parsons**
Los Angeles, California
- Bob Sweikert**
Los Angeles, California
- Jim Rathmann**
Los Angeles, California
- Pat Flaherty**
Glendale, California
- Bill Vukovich Sr.**
Fresno, California
- Jimmy Murphy**
San Francisco, California
- Al Unser**
Albuquerque, New Mexico
- Al Unser Jr.**
Albuquerque, New Mexico
- Jimmy Murphy**
San Francisco, California

- Howdy Wilcox**
Crawfordsville, Indiana
- George Souders**
Lafayette, Indiana
- Sam Hornish Jr.**
Defiance, Ohio
- Bobby Rahal**
Medina, Ohio
- Frank Lockhart**
Dayton, Ohio
- Wilbur Shaw**
Shelbyville, Indiana
- L.L. Corum**
Jonesville, Indiana
- Louis Schneider**
Indianapolis, Indiana
- Bill Cummings**
Indianapolis, Indiana
- Joe Dawson**
Odon, Indiana
- Parnelli Jones**
Texarkana, Arkansas
- A.J. Foyt**
Houston, Texas
- Johnny Rutherford**
Coffeyville, Kansas
- Rick Mears**
Wichita, Kansas
- Rodger Ward**
Beloit, Kansas
- Troy Ruttman**
Mooreland, Oklahoma

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Coffeyville, Kansas
- Rick Mears**
Wichita, Kansas
- Rodger Ward**
Beloit, Kansas
- Troy Ruttman**
Mooreland, Oklahoma



Vector Portraits

Photographs by **Andrew Bush**



Woman caught in traffic while heading southwest on U.S. Route 101 near the Topanga Canyon Boulevard exit, Woodland Hills, California, at 5:38 in the summer of 1989



Man traveling southeast on U.S. Route 101 at approximately 71 mph somewhere around Camarillo, California, on a summer evening in 1994



Man continuing east at 67 mph on Interstate 10 near Palms Boulevard in Los Angeles at 4:14 p.m. in February 1991



Woman taking her time rambling south at 63 mph on the Hollywood Freeway near the Vine Street exit in Los Angeles on a Saturday afternoon in 1991



Man driving northwest at 60 mph on U.S. Route 101 in the vicinity of Hollywood on a late Sunday afternoon in March 1991



Man traveling north at 64 mph on the Glendale Freeway near Verdugo Road, Los Angeles, at 3:13 p.m. on Thursday, February 20, 1997



Man (possibly someone in character) traveling northwest at 60 mph on U.S. Route 101 in the vicinity of Hollywood on a late Sunday afternoon in March 1991



Woman gliding southeast at 64 mph on U.S. Route 101 near Santa Barbara at 4:39 p.m. sometime in March 1990



Man proceeding southeast at 71 mph on Interstate 280 at Alpine Road, near Stanford University, at 3:21 p.m. on January 21, 1992



Person traveling north at 62 mph near Sherman Oaks, California, on a Tuesday in 1990 (this may instead be Phoenix or St. Louis)



Family traveling northwest at 63 mph on Interstate 244 near Yale Avenue in Tulsa, Oklahoma, at approximately 4:15 p.m. on the last day of 1991



High school students facing north at 0 mph on Sepulveda Boulevard in Westwood, California, at 3:01 p.m. on a Saturday in February 1997



Woman waiting to proceed south at Sunset and Highland boulevards, Los Angeles, at approximately 11:59 a.m. one day in February 1997



Man drifting northwest at approximately 68 mph on U.S. Route 101 somewhere near Camarillo, California, one evening in 1989

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Notes From The Velodrome

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Farmland World

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1000 Hour Exposures

Michael Chrisman (pg. 84-85, 88-89)

The Truffle

Ensamble Studio (pg. 90-95)

Race To Build

MAS Studio (pg. 96-103)

On The Quickening of History

cultureNOW (pg. 104)

Looking For A Theory Of Real-Time Knowledge

Courtesy of Troy Conrad Therrien (pg. 108-109)

Speedway, Indiana

Stephen Killion (pg. 116-123)

Vector Portraits

Andrew Bush (pg. 124-133)



NEXT ISSUE:

12 | **ABERRATION** WINTER 11

Our next issue will focus on the topic of ABERRATION.

In society, an architect's responsibilities and prowess are measured by practical considerations - a legacy that can be traced to the origins of critical thought in architecture over 2000 years ago. If firmness, utility, and delight are the enduring pinnacles of architectural achievement, then it would appear architecture's moral destiny is a foregone conclusion. But is it possible that opportunities for valuable cultural insight are being lost or dismissed out of deference to this legacy?

MAS Context ABERRATION will be co-edited by Iker Gil and John Szot (Columbia University, John Szot Studio).

For information on the submission guidelines and other questions, please visit www.mascontext.com

12 | ABERRATION WINTER 11 will be published on December 5.

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