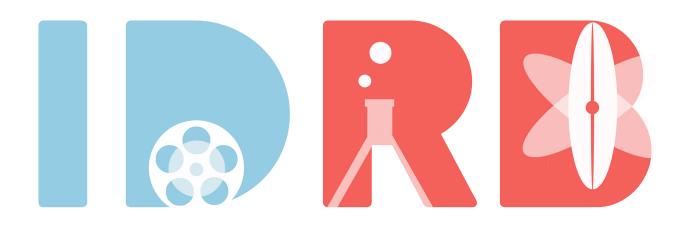
A low-cost, low-risk proposal for citizen-centered, innovation-driven Redondo Beach waterfront revitalization



Nancy J. S. Langdon nancy.langdon@gmail.com Tel./SMS 310 714 9886 On January 31, 2016, I shared with community activists a high-level analysis, which shined a harsh light on the CenterCal proposal for the Redondo Beach waterfront. I touched on a possible solution, as well. Within that analysis, I outlined three options for the City:

"If the option to self-fund repairs is off the table, the City, therefore, stands at a juncture, where it has in essence three options:

- (1) Do nothing and allow the area to continue to deteriorate until it is unusable,
- (2) Have someone else foot the bill for these maintenance items and upgrades in exchange for exclusive use of the gesamt-real estate for 99 years.
- Or (3) create a joint public/private steering committee to create a vision, set a mission and write a use plan for publicly-lead redevelopment with the greatest public welfare as its goal."

The January 31 analysis goes into some detail about (2) above, as it concerned the looming CenterCal proposal.

IDRB is one approach to achieving (3) above: creating a joint public/private steering committee to create a vision, set a mission and write a use plan for publicly-lead redevelopment with the greatest public welfare as its goal.

At a very basic level, I wish to "flip the script": I want to point out how exactly that, which has been deemed the waterfront's greatest liability, is perhaps its greatest asset.

The model around which I will discuss this is the practice of **endowments** as exercised by, for example, universities or foundations. The endowment model is then coupled with the **venture capital** model.

Executive Summary

IDRB is a four-tier approach:

- 1. Redefinition of empty properties and use of the land and venues as **endowment resources**, which can be made available to further the advancement of public welfare. Follow a **venture capital approach** to invest in innovation.
- 2. Define Return on Investment (ROI) in terms of 1) possible monetary return <u>and</u> 2) public welfare.
- 3. Invest this "venture capital" in innovative and quality-of-life-enhancing start-ups.
- 4. Divest in failing opportunities and reinvest in more promising ventures.

This would be accomplished in detail by:

- Establish a board of directors, which includes experts outside of government, including economists, creatives and urban visionaries.
 The board and broad participation by Redondo Beach citizens develop three to four directional goals.
- 2. Create a not-for-profit LLC or Inc. around IDRB. Hire staff or service providers and recruit volunteers with responsibilities in coordinating with stakeholders, marketing, administration, logistics, finance, accounting and general management
- 3. Partner with nonprofit organizations supporting the creative arts and film in Los Angeles to identify investment opportunities.

Each step will be characterized by:

- 1. Transparency
- 2. Highest standards of ethics

To achieve this, the installation of an ombudsman or an oversight committee comprised of Redondo Beach citizens would be recommended.

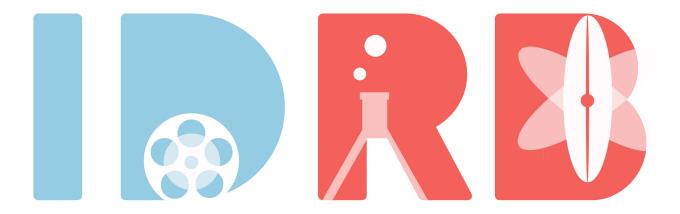
Introduction

Measure C passed handily, receiving 57.3 percent of the vote. It appears that Measure C will torpedo the CenterCal plan for the Redondo Beach pier and shoreside property as currently designed. CenterCal has filed a \$14 million lawsuit, hoping to prevent the measure from taking effect. It is unclear at this time a) whether the lawsuit has merit, and b) whether a successful lawsuit would result in either thwarting Measure C or causing significant negative financial impact to Redondo Beach.

The above lawsuit notwithstanding, the voice of Redondo Beach's citizens is loud and clear: The CenterCal vision is not one, which resonates with Redondo Beach. On the other hand, both among supporters and opponents of Measure C, there is one overarching consensus: Something needs to be done to improve the waterfront.

In my analysis of 31 January, 2017, I introduced a market-driven approach for waterfront redevelopment, which has more advantages, both for the success of the project and the public welfare than an eggs-in-one-basket, central planning strategy.

But how to get the ball rolling? I propose to give that ball a good nudge in the right direction through a new concept. I have given it the working title IDRB.



IDRB is the name, as well as the approach.

In the name, "ID" stands in for "identity". "RB" stands in for "Redondo Beach", naturally, but also for "Right Brain", the creative hemisphere.

The approach

I: Identity, Idea, Innovation, Incubation

D: Diversity, Destination, Destiny, Data

R: Resources, Recovery

B: Beach, Bonds, Betterment

Terminology

City: "City" (capital "C") will refer to the administrative bodies, elected and appointed officials, who are responsible for the governing and administration of the City of Redondo Beach.

Endowment: Universities and foundations administer resources, for example, buildings, research facilities, faculty, as well as financial funding, to promote advancement in defined areas.

Redondo Beach: "Redondo Beach" (without the preface "City of") will refer to the citizenry and community.

Rent and lease: For the purposes of this proposal, the terms "rent" and "lease" may be interchanged, and will include both month-to-month arrangements and multi-year lease agreements. Generally speaking, "Rent" refers to the concept of the use of property by someone other than the owner.

Venture capital: Investors invest in new, sometimes unproven concepts in the hopes of a large payoff. Venture capital firms understand that failure is the norm; in general, venture capitalist expect one from twenty investments to be profitable. However, that one in twenty–so the venture capital model–is extremely profitable. For the purposes of this proposal, "venture capital" may refer to the concept of using physical assets in lieu of financial support as investment capital.

Waterfront: In this proposal the "waterfront" will refer to the Redondo Beach pier and the land shoreside bound on the eastern side by Harbor Avenue, extending from Portofino Way to the north to Veterans' Park at the south. As explained in my analysis of 31 January, 2016, it is my opinion that a comprehensive inclusion of the public parks, Veteran's Park and Czuleger Park, be considered in the overall vision. Therefore, the proposal may also touch on the inclusion of these parks, however, not directly in the development plan.

Current situation

What does Redondo Beach have?

Redondo Beach already won the real estate lottery: Public oceanside property in sunny Southern California, which includes the largest, most versatile pier along the entire West Coast, as well as a marina. The pier and its predecessors in this location, have been a landmark for over a century. This area is bordered on the southern end by a large public park, which features a playground, mature trees, ocean views, a veterans' memorial and a historic landmark.

In addition, the area is already being utilized according to Project for Public Spaces criteria for "placemaking". Young and old, men and women, people of many ethnicities, of every socio-economic status, abled and disabled alike are found using the waterfront. What is lacking is an overarching appeal.

Horseshoe Pier: The horseshoe pier offers anglers a place to fish and pedestrians access to the sea. It is home to some nostalgic and quirky elements of the waterfront, including Old Tony's. Many of the buildings are in need of updating and significant repair. The buildings are not of a size or a design that will appeal to national retailers, who would have the capital to invest in improving the properties.

Monstad Pier: Older portion of the pier featuring traditional wood boardwalk, which includes the Fisherman's Wharf, a two-story facility including souvenir shops and eateries.

Pier Plaza: "A mixed Standard and Creative Office project" perched atop the parking structure. The Pier Plaza is ideally located, however, poor architectural design and indirect access has resulted in a ghost town atmosphere. The businesses present are a hodgepodge of mostly professional offices, with little to no foot traffic present. The properties are leased with 60 month terms.

Pier Plaza Parking Structure: Paid parking for beach and pier access. A bike path runs through the parking structure. The parking structure is in need of repair, however, it is a large revenue generator, perhaps large enough to finance repairs on its own.

International Boardwalk: "A lively retail and restaurant project that lines the Redondo Beach Marina adjacent to the pier." Originally, what we call today the "International Boardwalk" were boat lockers installed to serve the fishing vessels in the marina. At some point, the locker leaseholders thought it made sense to sell their fish directly from these lockers. That ad-hoc commerce developed into a thriving and established fish market and later into other commercial ventures, such as bars and souvenir shops. It requires quite a bit of jerry rigging to turn a boat locker into a bar and many of these operations would not be permitted today, if not grandfathered in.

Torrance Circle and entry to waterfront area

Parking lots, restaurant buildings, Seaside Lagoon: An area with several large restaurant use buildings and parking areas serving the marina.

The facilities on the pier are both underutilized and have lost on appeal. Especially the parking structure, the bike routing through the parking structure and the building perched on top of the parking structure. The northern end is dominated by poorly planned building and parking lot placement, which impede the natural pedestrian and bicycle flow.

What does the City need?

- 1. The pier pylons and structural features are in need of repair and maintenance.
- 2. The waterfront buildings on top of the parking structure and on the pier are in need of maintenance and repair.

- 3. The sewers, which drain from the waterfront parking areas, are not in compliance with environmental regulations and require upgrading.
- 4. The parking structure at the base of the pier is in need of repair and maintenance.

What does the City want?

- 1. An increase in sales tax revenue.
- 2. Improved waterfront atmosphere and intrinsic appeal.

IDRB Approach:

- 1. Redefinition of empty properties and use of the land and venues as endowment resources, which can be made available to further the advancement of public welfare. Follow a venture capital approach to invest in innovation.
- 2. Define Return on Investment (ROI) in terms of 1) possible monetary return <u>and</u> 2) public welfare.
- 3. Invest this "venture capital" in innovative and quality-of-life-enhancing start-ups.
- 4. Divest in failing opportunities and reinvest in more promising ventures.

IDBR strives to foster and achieve two parallel and interdependent goal tracks: **Revenue and public welfare**.

To revenue, this would be achieved in three ways:

- Tax revenue from sales of products or services created by the IDBR participants.
- Portfolio value from successful ventures.
- "Rising tide" and feedback loops, as the ventures, particularly ventures of a cultural nature, increase appeal of the area.

To public welfare, this would be achieved in two interdependent ways:

IDBR participants will be chosen based on two fundamental criteria, both of which need to be met: 1) Feasibility and 2) civic benefit.

IDRB strives to answer these needs and wants for the waterfront in a simple, low-risk, organic, low-investment way.

The City of Redondo Beach owns or has under its purview unused and underutilized properties on the waterfront. The City of Redondo Beach recently bought out the lease agreements of several current lease holders to the tune of \$9 million. It can be expected, therefore, that the City of Redondo Beach will be responsible for yet more empty properties in the near future. This fact--that there are waterfront properties on and around a Southern California landmark in the nation's fastest growing megacity standing empty--is astounding. Clearly, the different properties have different cosmetic, use and structural issues. Nonetheless, the reason these properties are not currently occupied is simpler: Following classic economics, the properties are too expensive and the long leases present too great a risk. Price elasticity would require that the prices be lowered to meet a tenants' willingness to pay. However, following supply and demand and lowering rents lowers the properties' valuation. Furthermore, lowering rents could result in backlash from current tenants, who pay full price, as well as surrounding landlords, who collect higher rents commensurate with the rates charged by the City for its properties. And thus Redondo Beach is left with a damned-if-you-do/don't situation: On the one hand, rents should be lowered to meet demand, on the other hand, that would have negative impacts on the City moving forward. And so the properties remain empty or underutilized.

However, they needn't remain empty. On a basic level, the properties represent an intrinsic function that is used to achieve some purpose. These are spaces where people can work and that has value. Taking this thought further, the intrinsic value has a monetary worth and that monetary worth could be considered something which could be endowed. If we begin to think of these properties not as things to rent out, but as capital--moreover venture capital to be invested--more opportunities to have these properties productively occupied will present themselves.

For example, one could reasonably argue, that the primary reason the region stretching from approximately San Jose to San Francisco is the "Silicon Valley", is because industry pioneers were able set up shop inexpensively. Hewlett Packard was famously started in a garage and Apple Computer started in Steve Job's parents' house. Were it that these

innovators did not have access to free or cheap roof and walls, perhaps we would not know these names today, nor would the Silicon Valley be the global engine of innovation that is it. Palo Alto, Menlo Park and Mountain View are synonymous with innovation, computing, internet technology, prosperity and the future the world over, very likely because Steve Job's parents tolerated a bunch of young programmers taking over the garage and traipsing through the house. Steve Job's parents' welcoming of those young people in 1975 is why relative latecomer, Google, chose Mountain View as its headquarters and not, say, Redondo Beach. Forty years ago, Menlo Park, Mountain View and the rest of Silicon Valley were just small towns south of San Francisco. How do we get the next Pixar or Apple Computers or Tesla to arise and stay in Redondo Beach?

Real estate in Los Angeles is at a premium. The average house size in Los Angeles is 1,800 sq. ft. compared to 2,450 for the rest of the nation. The average Angeleno simply does not have the extra space to explore an opportunity. Entrepreneurs and creatives very often simply do not have the physical space for their ideas to come into fruition. And here is the City of Redondo Beach sitting on empty space.

In my analysis of 31 January, 2017, I discussed the role of government vs. private enterprise. I discuss how the function of government is to ensure public welfare, while the purpose of a business is to create a customer, which may enhance or be at cross-purposes with public welfare. Nonetheless, commerce is part and partial to any successfully thriving community. Therefore, regulating undesirable commerce and encouraging desirable commerce in light of public welfare is an important function of City government.

In a first step, the City should set for itself a goal of what Redondo Beach would like to see itself be recognized for around the world in twenty years. To this end, some initial visioning workshops have been held. From these visioning workshops a defined set of targets can be mutually agreed upon by all stakeholders. The intend of this proposal is not to define or even suggest these targets: it is simply hoped to encourage a method. The following is intended simply as **examples** of possible IDRB projects:

Targets: Encouraging healthy lifestyles, engaging senior citizens, encouraging environmentalism, fostering the creative arts.

Endeavors that would hit each of these targets is the following:

Example 1. Collect ocean and beach trash to create a beach gym.

Workout equipment (free weights, benches, etc.) are crafted by volunteers from beach and ocean refuse collected from, for example, beach clean-ups and from Ocean Defenders Alliance¹. The equipment will be free to use. Fitness classes for seniors would be offered.



This idea is inspired by a story about an avid fitness enthusiast on Cape Verde, who could not afford a gym membership. Construction worker Alcindo Soares collects the flotsam and jetsam that washes ashore and creates workout equipment, which he makes available on the beach for people to use for free.

See the inspirational video here:

https://www.youtube.com/watch?v=9brqFuZ1vwI

Similarly, it would be easy to store and sort the materials in unused portions of the parking structure.

Example 2. Collect ocean and beach trash to create art.

¹ http://www.oceandefenders.org/

Inspired by Washed Ashore -- Art to Save the Sea, artists collect flotsam and jetsam and beach debris to create works of public art and educate the public on ocean pollution.



Perhaps create a Washed Ashore studio at the waterfront, where people can see art, learn about ocean pollution and also deposit debris collected on the beach.

It would be easy to store and sort the materials in unused portions of the parking structure.

It is important to note in both of these examples, that these do not create a great deal of revenue in and of themselves. However, they can serve as a catalyst to the surrounding businesses (sporting good retail, gastronomy).

One way to attract innovation might be for the City to invest in start-up companies. The way it would do this using its "venture capital" on the waterfront. By offering use of the properties under Redondo Beach's control to incubate innovative start-ups in exchange for a stake in those companies, Redondo Beach will kill three birds:

- 1. It will develop a venture capital portfolio, which has the potential to create long-term revenue for Redondo Beach
- 2. It will populate the underutilized waterfront with fresh blood, new opportunities and innovative thinkers and doers
- 3. It will allow the City to encourage operations, which may not have an expected rate of return, but would benefit the quality of life of Redondo Beach.

An example of such an arrangement might look like this:

A start-up would approach the IDRB board with a business plan and deck. They would state their need for real estate and the duration of use. In exchange for the use of the real estate for a specified period of time, IDRB would receive a stake in the firm. For example, if a property on the waterfront is asking rent of \$5,000/month and a start-up would need use of the property for 24 months, that is a \$120,000 investment. Based on, for example, KickStarter investment or sales data, one might be able to calculate a valuation of that start-up and therefore the stake that \$120,000 would represent. At the end of the 24 month period, the start-up would be subject to the normal rent and/or a new agreement with IDRB.

In addition, however, IDRB would also, in collaboration with the City, define public welfare goals and figure those into the valuation calculation. For example, the City, along with community representatives, would define goals for

- Seniors (for example, seniors require accessibility, a feeling of safety and belonging, and a chance to participate in the community)
- Teens (for example, teens require physical activities and opportunities to create and define themselves)
- Families with young children (for example, young families need safe spaces to allow their children to play and where the parents can form communities with other families)
- Environment (for example, the waterfront location is an ideal venue to learn about ocean ecology, pollution and the vital role the "world's lungs" plays in our own survival)
- Cultural Life (for example, a waterfront naturally attracts people. If things of cultural value are placed in this setting, then they will be utilized. Furthermore, cultural assets attract businesses, which serve

the people using the cultural asset. For example, a surfing museum attracts people interested in surfing and a surf shop may be a natural neighbor; a performance stage attracts music lovers and a gastro pub may choose to locate near the music)

Success and failure

"Eight out of ten new ventures fail" is an urban myth. The US Bureau for Labor and Statistics shows that 50% of businesses make it to their fifth year and one third make it ten years. The Small Business Administration calculated that 66% make it two years.

Venture capitalists understand that not every venture is going to be a hit: The rule of thumb is that for twenty investments, one may have the potential to turn out to be a Google, thereby justifying the risk taken.

Within this proposal, I wish to define success and failure a little more broadly. Consider the following scenario: An art cooperative seeks creative and gallery space. Artists come to the waterfront, create their work, providing stimulus for more people to come to the area. Those people spend money in the cafés and shops while enjoying the art. However, the gallery doesn't turn a profit and in most circumstances would be required to up stakes. However, if one looks at the economic ecosystem and the role the art cooperative plays in this example, one will recognize the value to continue to "invest" in the art cooperative by continuing to allow it to continue operations in the property.

"The road to hell..."

We know well how that road is paved. Each well-intentioned paving stone on the road to a better waterfront is not without its downsides. Especially as the waterfront has been at the forefront of public debate and brought to the ballot box three times in less than two decades, the subject is surely fraught with emotion. It is of the utmost importance, that the community is kept in the loop on all activities. To this end, an ombudsman and/or oversight committee would function.

Furthermore, measureable, quantifiable standard for success will be defined for each proposed project and for IDRB. Yearly reporting to the

people of Redondo Beach will occur in a public event. Should IDRB not meet those measurable goals, the whole thing can (and should) be scrapped.

What business, for example, wouldn't like to have a place to start up rent-free? First off, the use of the properties and facilities is not free: It is offered in exchange for a stake in the business. Secondly, not just any business proposal will meet the hurdles of innovation **and** civic benefit. It should serve as an incubator for new products, services and ways of doing things. For example, another pizza joint doesn't represent innovation and would not be considered. The appeal of the area should be enough that a pizza joint should attract enough customers to be successful without this type of investment. However, a pizza joint that offers a civic benefit, such being owned and operated by adults with disabilities, might be given consideration.

It will happen in business, that venture capital will be secured for a proposed product or idea, and once the money is deposited, the company decides to do something completely different. Because what is being invested here is not "just" money, but use of public waterfront property, which people will walk by and with which people will perhaps identify, IDRB will require assurances, that the firms follow through on their proposed business ideas. These assurances can include punitive measures, such as eviction and monetary compensation, and would need to be set within the agreements.

Feasibility

I do not doubt that there is currently wording that may prevent an arrangement as proposed above, perhaps in the City charter. Words, however, can be rewritten or reinterpreted. For example, SpaceX, the maker of reusable rockets, was recently granted a ten-year property tax exemption for the land from which they launch their rockets. Except the property tax exemption isn't really a "property tax exemption" in the wording: The land from which SpaceX launches rockets has been designated as "inventory", much like the SpaceX's other business inventory, such as the space propulsion systems, space vehicles, launch vehicles and so on, for which there is the business inventory exemption applies. This particular "piece of equipment", a broad swath of dirt and rocks and plants and geology formed

and firmly attached to the earth, may look like a piece of real estate to the layman, but according to the words on paper, this is rocket launching equipment. If that can be done for SpaceX, I cannot imagine why the buildings, structures, open spaces and so on at the waterfront could not similarly be considered something other than real estate.

Structure of IDBR

A ship's operation is a symbiosis between the Master (ship's captain) and the Chief Engineer. While the Master sets the course, the Chief Engineer, ultimately, makes the ship move, ensures the systems are working and that safety is ensured.

I envision IDRB working much the same way: IDRB is the ship's Master and the City is the Chief Engineer. IDRB would establish the course, however, the City would have the say whether the planned course was possible. IDRB would then adjust course as required.

Board of Directors

The IDRB Board of Directors would be comprised of individuals with very specific areas of expertise. It is important that IDRB have neither the appearance nor the function of currying political favor. Therefore, positions of authority and direction need to exhibit expertise in defined areas. These areas include the following:

Economics

As outlined above in the example of economic ecosystems, it is recommended to include an economist on the board of directors. Economists are adept at identifying correlations and antecedents and assigning values to and calculating intangibles, such as "fun factor" or "customer satisfaction" or "educational impact". An economist will use, for example, causal modeling, to measure the true costs and predict successes and failures.

Art and Culture

Los Angeles is home to largest concentration of creative experts in the world. Musicians, muralists, filmmakers, choreographers, and all manner of visual and performing artists are right here: It makes sense to tap into this amazing resource to improve the cultural life of the waterfront.

Environment

Restoring the destroyed environment is neither a feel-good issue nor a political one. The science is undeniable. It is everyone's responsibility, who lives here, to clean it up. This includes Redondo Beach. An environmental expert, for example an ecological landscape designer a climate scientist or a environmental lawyer would be an asset in creating a healthy asset for Redondo Beach.

Urban planning

An expert, for example an academic, with expertise in the antecedents in successful public spaces would be an asset on the board of directors.

Entrepreneurship

A person with experience in either starting up new ventures or financing them would be valuable in evaluating the viability of the business proposals presented. This person would also serve as a gatekeeper to the proposals coming in, that they meet hurdles of innovation and/or civic benefit as defined by IDRB.

City Government

A person with authority within City government to provide feedback as to the proposed "venture capital" investment. This would include legal responsibilities.

Advisory Committee

The advisory committee is comprised of stakeholders in the community and people with needed expertise. As the name suggests, their role is to be advisory; decision making resides with the board. The advisory committee would be comprised of community activists, business leaders, neighborhood groups and so on.

Event planning

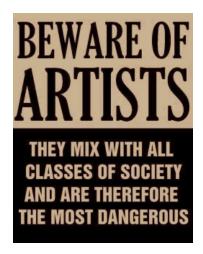
Central to the revitalization of the waterfront are planned events large and small.

Community activists

Redondo Beach has the great good fortune to have an engaged citizenry, which will organize and mobilize around concepts they believe in. It is recommended to include representatives of Rescue Our Waterfront and Save the Riviera, as well as other community and activist groups for input and feedback.

The IDRB Economic Ecosystem

Art and culture



A quote attributed to Queen Victoria of England and printed on bills posted around London.

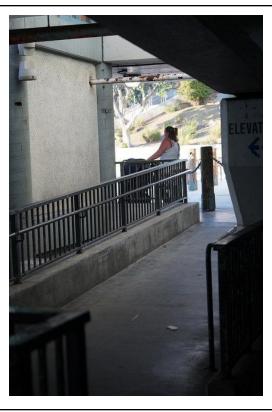
Already, without the benefit of a visioning and goal-setting workshop, there is one particular area I would encourage--the fostering of art. Street murals are Los Angeles' art. Vienna has the walz, Los Angeles has street art. These photos below may seem like blight, but in the hands of a street artist, these are blank canvases:

What is...



What could be...





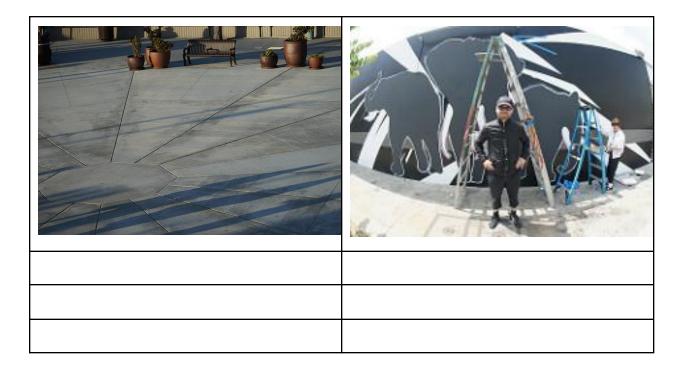












Ten years ago, walking through DTLA Arts District, one had to be wary of stepping on hypodermic needles and the sickening tang of urine hung in the air. But the large spaces afforded by the empty industrial properties–rent sometimes as low as \$0.12 per square foot–provided fertile ground for LA's creatives to innovate. Swiss gallerists Hauser Wirth & Schimmel picked up on the this West Coast art movement and set up shop. Cafés and boutiques followed. Today, condos in DTLA sell for \$2 million apiece. The area, ironically, is too expensive now for the artists and they are seeking concrete and rust in places further afield, like Boyle Heights. Redondo Beach has unsightly concrete and rusting rebar: Why not invite art in?

Artists tend to be solitary for a reason. Creativity cannot be achieved through committee. An original idea is a singularity and only becomes less original, as it is passed along through consensus. That is the reason great works of art have only one name attached. For this reason, the public art created would be simply an up or down vote, and the down vote would be because the proposed artwork would violate certain norms and standards of decency and civility. In other words, the art may be provocative, but not inciteful.

Moreover, it seems obvious to reach out to the 30 billion dollar industry which is already here and make it welcome: The film industry. Quentin

Tarantino worked in a video rental shop right here. And yet, he hasn't returned to base any of his stories here. La La Land filmed in Hermosa Beach: Recently, the production company brought eight plastic prop lamps used in the movie back to the pier. On that evening, tens of thousands of Angelenos showed up to take selfies next to those same plastic prop lamps. They also visited the restaurants and took home t-shirts from the shops. Who would have ever imagined that eight plastic prop lamps would have fueled tens of thousands of dollars in revenue.

Recently, I opened my home to a young production company, so they could shoot an independent film. Although they had lived in Los Angeles for years, they had never been to the South Bay.

I would propose engaging with organizations such as Film L.A. and From the HeART Foundation to signal to young creatives, that Redondo Beach is there for you. We will offer locations and other assistance to make producing your work easier.

Innovation: IDEA GARAGE

Offer the underutilized parking structure for experiments in alternative personal transportation



Does the image above look familiar? It is very likely that you have a later version of that in your pocket right this minute. That is a photograph of the first prototype for the iPhone. If you look carefully, you will recognize all the components that created the first smartphone and soon revolutionized the way we live.

Ride sharing with autonomous vehicles looks very much the same. We have all the components necessary right there on the table: fourth-generation autonomous vehicles, GPS, smartphone apps, Uber and Lyft business models, electric charging stations, even user profiles (for passenger safety). It is technically feasible to press a button on a smartphone, have an autonomous vehicle appear at your door and take you wherever you need to go, or your drycleaning needs to go, or the lamp you sold on Craigslist needs to go and get paid through your bank account or credit card. However, the business models to make such personal transportation a reality have yet to be tested. The iPhone did not revolutionize the world alone: It took the marketplace of apps to really change things. Similarly, autonomous vehicles alone are not going to revolutionize personal transportation, but a market of services and different sharing models will. Many large municipalities, such as Paris and Oslo, are moving toward car-free city centers.

The traffic situation in the South Bay is ripe for a transformation of personal transportation. Distances of under ten miles can take 40 minutes to drive. During rush hour and in areas near schools at 3 pm, cars can wait two and three traffic light cycles to make it through an intersection. For myself, I have something I call "lane change anxiety": At most times of the day, I need to think two and three blocks ahead to safely change lanes for a turn. For example, my car's navigation system usually instructs a turn within 500 feet or so: Because of congestion, that is often not enough distance to maneuver into the correct lane safely. For many reasons, the models of public transportation for personal transportation which work very well in the rest of the world, have been thwarted at every turn in Los Angeles. Whether Angelenos really "love their cars" is up for debate: What is not up for debate is that individualized transportation is (figuratively and literally) going nowhere. Therefore, this is an ideal petri dish for car manufacturers and autonomous driving business models.