

# **LAFC Sustainability Plan**

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# I. Executive Summary

In order to appropriately assess LAFC's sustainability plan, it is essential to assess what the current context is in sports. I analyze six professional sports organizations to see what sustainability and Corporate Social Responsibility elements these pertinent teams incorporated. These teams were selected by any combination of relevance to LAFC including heightened level of sustainability or CSR commitment, fellow MLS organization, recent stadium rebuild, or geographical proximity to LA. These teams are the Sacramento Kings, Portland Timbers, LA Galaxy, San Jose Earthquakes, Seattle Sounders, and San Francisco 49ers. Some of the major CSR and sustainability elements included community enrichment, water conservation, landfill diversion, sustainable transportation, and energy efficiency.

To frame LAFC's sustainability plan, I incorporate sustainability scorecards for Leadership in Energy & Environmental Design (LEED) and Council for Responsible Sport (CRS). LEED is the most widely used green building rating system in the world. LEED certification includes design, construction, operations and maintenance to support resource-efficient and high-performing buildings. The CRS "Where We Stand" scoresheet includes planning & communications, procurement, resource management, access & equity, and community legacy. CRS has a focus on CSR as well as sustainability.

The Green Sport Alliance contains a Greening Advisor document that is vital for my assessment of LAFC's facility management. The tool is useful as it is customizable to the sport and league in question. The Greening Advisor goes through systematic and comprehensive steps to optimize an organization's sustainability effort. I used the "Where We Stand" scoresheet to track the sustainable certification provided by the Council for Responsible Sport through the steps of the Greening Advisor.

LAFC's operations management plan requires going in depth with the "Where We Stand" scoresheet. This section explores all five stages and includes suggestions to satisfy each stage, with potential partnerships for LAFC and examples of what other teams are currently doing in the stages. Periodically, points toward CRS certification are tallied up with each applicable suggestion to track the sustainability progress.

# II. What Teams are Doing

Organizations were selected for inclusion based on pertinence to LAFC. Categories of pertinence were primarily based on teams' proximity to LA and the heightened commitment to sustainability.

# A. Sacramento Kings

The NBA organization is not generally known for on-court success, yet today, the team, arena, and city are known for being the shining leader in a variety of sustainability initiatives in sport. Sacramento is the farm-to-fork capital of the US, so naturally the team and mayor Kevin Johnson have made bold strides to provide the most comprehensive "Farm-to-Court" experience there is. The Golden1 Center that opens in October 2016 will become the preeminent sustainable event center in the world. [The following information found at http://www.golden1center.com/visit/concessions/philosophy]

#### Sustainable Food

- The Kings' sustainable food effort is innovative, pertinent to the local context of Sacramento, and should be viewed as an example of how teams should responsibly source food.
- Drafted a 10-point charter outlining with hospitality partner Legends to work directly with farmers, growers and chefs to produce a unique eating experience.
- Executive chef and all restaurant partners source 90% of their food from a 150-mile radius: "Farm-to-Court."
- The majority of beer, wine and spirits will also be sourced within the same 150-mile radius. Partnering and supporting 740 local vendors and protecting California's agriculture industry and its \$45 billion contribution to the economy.<sup>2</sup>
- All leftover food is donated to Sacramento Community Food Bank and Family Services via the Kings' Second That program- supporting over 200 local agencies.
- The green waste (vegetable trimmings, protein trimmings, scraps, etc.) will be treated by a revolutionary program called California Safe Soil.
- CSS treat the waste with organic enzymes and process in a giant food digester. It is then pasteurized, filtered and placed back in the soil at local farms.
- Any leftover locally produced rice bran oil (fryer oil) will be converted to biodiesel by a local family run business.

# Solar Energy

• The Kings' dedication to solar energy and achieving net-zero energy is another initiative that is innovative and should be celebrated.

- 100% Solar-powered: first net-zero energy stadium.
- Partnership with Sacramento Municipal Utility District to ensure the lightest environmental footprint of any arena in the world.

<sup>&</sup>lt;sup>1</sup> http://www.sacbee.com/food-drink/article66764112.html

<sup>&</sup>lt;sup>2</sup> http://www.nba.com/kings/news/kings-announce-partnership-with-legends-hospitality

- 20-year SolarShares partnership with SMUD provides 85% of the annual electricity of the arena (the rooftop solar array provides the remaining 15%).
- 10.88 megawatt Rancho Seco solar farm- 60 acres and 100,000 solar panels.

#### Water Conservation

- Arena uses 40% less water.
- Will use 700,000 less gallons of water annually, 45% improvement over code.

#### Landfill Diversion

- 98% of demolition materials were recycled.
- 95% of construction waste was diverted from landfill.
- Demolition and construction materials that were recycled equaled 100,848.66 tons, including concrete, wood, paper, and metal<sup>3</sup>
- 36% of construction material was sourced from recycled materials, including fans' discarded athletic shoes for the foam layer beneath the court.

# Energy Efficiency

- 5-story aircraft hangar doors open to the city, utilizing the cooling Delta Breeze to the interior of the stadium.
- Pioneered the FanFirst Connected Comfort system: cooling air through the floor rather than the ceiling, cooling the fans more easily while using less energy.
- 30% less energy used.
- The site location, the energy efficient design, and the sustainable operations will cut 2000 tons from the annual carbon footprint, equivalent to 4 million vehicle miles.
- Consulting and collaboration partnership with SMUD helped Golden1 Center achieve LEED Gold, the first NBA organization in the state to do so.
- SMUD provides incentives for energy-efficiency measures.
  - o Heavy LED light usage.
  - o Highly efficient HVAC.
  - o Advanced energy controls.
  - o The rooftop solar photovoltaic system.

# Sustainable Technology

- Internet speeds 17,000 times faster than the average home.
- Provides fan with his smart device to find the shortest line, order food, or interact with the team's social media with greater efficiency.

### Sustainable Transportation

• The site selection is convenient for travel by foot, bike, bus, and train.

Green spaces: The team planted or built green walls, shade trees, and rain gardens to invite patrons to enjoy the seating provided in the plaza.

<sup>&</sup>lt;sup>3</sup> http://www.nba.com/kings/news/esc-exceeds-recycling-goals

Sustainability statistics and information from http://www.golden1center.com/visit/concessions/philosophy, http://www.nba.com/kings/news/esc-exceeds-recycling-goals, http://www.sacbee.com/food-drink/article66764112.html, http://www.nba.com/kings/news/kings-announce-partnership-with-legends-hospitality.

The Sacramento Kings and the Golden1 Center are members of the Green Sports Alliance.

#### **B. Portland Timbers**

The reigning MLS Cup Champions are also known for their efforts to support the environment and the community in Portland. The team has sold out every game since its inception at Providence Park, where the team maintains LEED Silver Certification. [The following information found at http://www.timbers.com/stand-together] The Timbers started the Stand Together program. The mission: to harness the power of sport to improve the lives of children and families through targeted programs, deep partnerships, and philanthropic giving.

# Environmental Stewardship

- "Score a Goal: Plant a Tree" program with Friends of Trees makes surrounding neighborhoods greener. A tree gets planted within city limits for every goal (quite a few more actually). Since 2011:
  - o Trees/shrubs planted: 2747
  - o Pollutants removed: 494,460 lbs.
  - o Carbon Dioxide absorbed: 131,856 lbs.
  - o Polluted rainwater intercepted: 6,537,860 gallons<sup>4</sup>

#### Landfill Diversion

- Recipient of "Recycle Works Award" from Portland Sustainable Development.
- Green Team: Active with training, housekeeping, and monitoring recyclables.
- Recycling/ Composting: Onsite recycling including items like pallets and cooking oil.
- All kitchens compost all applicable items
- Recycling bins placed throughout stadium for fan participation.
- Earth Day Project with MLS WORKS at Hosford Middle School each year.
- Repurposed items: Old banners sold as bags with partner "Relan." Timbers 3<sup>rd</sup> kit made with repurposed materials.<sup>5</sup>
- Construction materials donated to Habitat for Humanity.

Food donation: Comprehensive food donation program in place.

<sup>&</sup>lt;sup>4</sup> http://www.timbers.com/post/2013/12/04/portland-timbers-and-stand-together-set-score-goal-plant-tree-saturday

<sup>&</sup>lt;sup>5</sup> http://www.bizjournals.com/portland/blog/sbo/2013/10/timbers-look-to-boost-jeld-wens.html

Sustainable Transportation: Ample bike racks provided for fans and employees.

Green Office Makeover: Greened the office with the help of GSA and Office Depot.

# Community Enrichment

- Portland Timbers Community Fund (PTCF) is an advised fund of the Oregon Community Foundation, and supports charitable, non-profit organizations that are located in one of the four counties surrounding the Portland metropolitan area.
   Organizations seeking grants must have a focus in one of the following disciplines:
  - Youth Sports
  - Youth Education
  - o Youth health & fitness
  - o Environmental awareness and activism with youth and families
- Tix for Kids! Program: Generous sponsors donate tickets to kids and to non-profit organizations that apply.
- Annual Stand Together Week- Comprehensive, weeklong community initiative supports dozens of non-profit projects and volunteer events around Portland.

#### Youth Health

- Fields for All is a field building collaborative between Timbers/Thorns Stand Together community platform and Operation Pitch Invasion.
- With the assistance of an array of sponsors, the campaign builds safe high quality playing surfaces (soccer fields and futsal courts) for children in "recreation deserts." "Recreation deserts" refers to communities lacking recreational activities for kids.

Global Assist Program: Supports international soccer and social change programs. Stand Together, along with One World Futbol, donates an indestructible soccer ball per Timber assist, to programs working with underprivileged communities around the world.

Youth Education: Rose City Readers incorporates Timber Joey and players regularly visiting schools to motivate kids and their families to read.

Partner of the Stand Together community platform:

- Special Olympics Oregon
- Active Children Portland
- Boys & Girls Club
- Friends of Trees
- Girls Inc. of the Pacific Northwest
- Playworks of the Pacific Northwest

The Timbers, Providence Park, along with the Portland Thorns, are members of the Green Sports Alliance.

# C. Los Angeles Galaxy

LA Galaxy is known for being the best team in the MLS on a year-to-year basis. (Currently) The only team in LA, the city's ability to attract the globe's best talent is apparent when one glances the roster. Their stadium is the StubHub Center (Formerly Home Depot Center) in Carson, California. The StubHub Center is also a world-class Olympic training facility. In March, 2016, the Galaxy launched the bold "Protect the Pitch" campaign for its stadium.

[Following information found at http://www.lagalaxy.com/community/protectthepitch]

# **Environmental Sustainability**

• LA Galaxy's Protect the Pitch (PPP): Reducing the environmental impact of our games and practices, supporting environmental projects in our community, and inspiring our fans to create healthier, more sustainable communities.

# Community Enrichment

- Host the Carson Farmer's Market each Thursday to promote local and organic produce to the community.
- Employees volunteer regularly to clean up beaches and plant trees.
- Partner with local nonprofits to celebrate annual events and educate the community during Earth Hour, Earth Day, and America Recycles Day.

# Energy Efficiency

- Motion sensor lighting in the stadium.
- Comprehensive LED retrofit program saves significant lighting energy.
- Participate in Southern CA Edison's demand response events by lowering electricity use when the grid is overloaded.
- HVAC: Linked these to motion sensors to ensure use only when stadium is occupied.

Responsible Cleaning/ Machines: Purchased energy efficient models of boilers and washing machines, and purchased green cleaning supplies.

# • Storable Energy

o Tesla Commercial Powerpacks

This is one of the initiatives I highlight as being especially innovative. The LA Galaxy have purchased and installed commercial batteries at StubHub Center. The purpose is to shift usage from peak to non-peak times and to minimize event related demand spikes. The Galaxy is the first team to incorporate stored energy onsite. The technology in the Tesla vehicle batteries is similar to that of the Powerpacks. Tesla is evolving into the premiere battery systems manufacturer/energy storage company. The storage system interacts directly with the Southern California grid and earns revenue for AEG by providing valuable demand response to the utility. Demand response refers to the voluntary program that compensates large retailers for reducing their electricity during expensive power rates or when the dependability of the grid is threatened. Benefits: AEG saves

- money, Galaxy greatly reduces their carbon footprint, and the organization reduces the immense strain on the Southern California grid system.<sup>6</sup>
- Sustainable Food: Partnered with Levy Restaurants to source vegetables from onsite garden and to purchase local and organic fare for concessions.<sup>7</sup>

# Water Conservation

- Fields and landscaping irrigated with roughly 50% recycled water (since 2003).
- This saves around 35 Olympic swimming pools of drinking water annually.
- Waterless urinals, low-flow toilets, and faucet aerators minimize bathroom water use.
- Employee training in order to lessen water reliability during stadium cleaning.

Landscaping efficiency: Fields' grass clippings are efficiently sent to a local nursery to be returned to site as mulch.

# Landfill Diversion

- Recycling program in stadium.
- Purchase recycle-content paper products whenever possible.

# Sustainable Transportation

- Created initiatives like free shuttles to certain events and the promotion of public transit.
- Ample bike racks throughout stadium parking lots to encourage fans to this optimal form of sustainable transportation.

The team also encourages fans through the PPP to adopt all relevant sustainable practices at home to help minimize the environmental impact in the region.

StubHub Center and the LA Galaxy fall under the umbrella of and also support AEG's

AEG 1Earth- the corporation's environmental sustainability program.

#### AEG 1Earth

- Exchanges environmental best practices with participating venues.
- Measures monthly environmental performance: energy usage, water conservation, and landfill diversion.
- Strive for AEG's 2020 Environmental Goals<sup>8</sup>

LA Galaxy and StubHub Center are both members of the Green Sport Alliance.

<sup>&</sup>lt;sup>6</sup> http://www.sporttechie.com/2016/08/23/green/aeg-brings-energy-storage-to-las-stubhub-center-with-tesla-powerpacks/

<sup>&</sup>lt;sup>7</sup> http://www.stubhubcenter.com/about/environment

<sup>&</sup>lt;sup>8</sup> http://www.stubhubcenter.com/about/environment

#### D. San Jose Earthquakes

The Quakes are known for being on the cutting edge of sustainability initiatives especially with their new facility: Avaya Stadium. The Earthquakes' proximity to Silicon Valley demands the organization impresses with technology and sustainability initiatives. The two-time MLS Cup Champion club is also known for fostering the formative years of perhaps the best American soccer player ever: Landon Donovan. [The following information found at http://www.sjearthquakes.com/community]

# Community Service

- The team awards the "Andrew Bedard Spirit of the Game Award" each year to the Earthquakes player that exemplifies service to the greater San Jose community.
- San Jose Earthquakes Community Fund: The team hosts an annual "Wine and Dine with the Earthquakes" event, where the proceeds benefit the team's non-profit community fund. The buffet dinner and live auction and raffle garnered \$86,000 for the fund in 2015.
- 50/50 Raffle: The team has a 50/50 raffle each game where one lucky fan gets half the pot, and the other half goes to the community fund.
- Name in Lights: SJ Earthquakes take \$100 that goes into the community fund, in return, a special someone celebrating a birthday or simply because, gets his or her name put up on the stadium big screen.

#### Youth Education

- Bay Area All-Star Scholarship Team: The Earthquakes have teamed up with the Golden State Warriors, Oakland A's, Oakland Raiders, San Jose Sharks, and the San Francisco 49ers to award a college-bound student a \$5000 scholarship- out of the SJ Earthquakes Community Fund. This unique committee is the first of its kind in professional sports.
- BMW & Saves for Schools is a promotion where every save Bay Area BMW centers donates \$100 to a fund that benefits local schools.

Youth Enrichment: Kicks for Kids presented by PG&E, provides an opportunity to nominate a family or organization in need to attend an Earthquakes home match.

Youth Health & Wellness: Get Earthquakes Fit, is a team endeavor to encourage students to enjoy a more active, fit, and healthy lifestyle. Players record videos and make appearance to advocate for 20 minutes of exercise each day.

Avaya Stadium: Facility Initiatives:

#### Water Conservation

- Landscaping comprised of native plants that require less water.
- Recycled Water used in all landscaping.
- Drip irrigation that uses 50% less water than sprinklers.
- Spot mopping in place of power washing: saving 25,000 gallons per event.
- Stadium Bioswells that store 300,000 gallons of rainwater for later use.

• Watering system controlled by a smart clock that detects rain and adjusts accordingly.

# Energy Efficiency

- VIP Parking Solar Panels that generate enough power to make the stadium net zero on game day.
- More LED lights than any stadium of its size.
- Solar panel powered cell phone charging station in Fan Zone.

# Sustainable Transportation

- VTA, Caltrain, and BART all service the stadium (public transportation).
- Bicycle parking is available at the stadium.

Sustainable Food: Avaya Stadium maintains an edible garden with plum, apricot and cherry trees.

Sustainable Resources: Recycled Redwood from local Hangar One at Moffett Field is throughout the stadium.

Environmental Change Promotion: Players actively promote actions like motor oil recycling, anti-littering, and minimizing landfill waste.<sup>9</sup>

The San Jose Earthquakes and Avaya Stadium are members of the Green Sports Alliance.

#### E. Seattle Sounders FC

The organization is known for having the largest and strongest fan support of any team in the MLS. The Sounders have sold out every game since the team's inception into MLS in 2009. The team shares a stadium with the NFL's Seahawks, and even with the massive capacity stadium, the Sounders have no trouble packing the house for every home game. The Pacific Northwest is also a region that is sustainability progressive. [Following information found at http://www.soundersfc.com/community-outreach]

#### Youth Enrichment

• PwC donates \$500 per home goal to Boys and Girls Club of King County in the "Goals for Success" program.

- BECU donates \$250 per home save to YouthCare's Employment training program for the "Saves for Youth" program. YouthCare's "Continuum of Care" deals with engaging the homeless youth; stabilizing this community in order to get them off the streets; and preparing them for a productive life.
- "Sounders in Schools" honors students and teachers who show leadership, collaboration, and initiative to solve problems facing schools in the Puget Sound. The Sounders players, alumni, coaches and staff promote teamwork, health and

<sup>&</sup>lt;sup>9</sup> http://www.sjearthquakes.com/avayastadium/features

wellness, leadership and goal setting. Nominated classrooms win 50 tickets to a Sounders FC match.

# Community Service

- "United We Serve" is a community enhancement program that creates the frequent opportunity for fan volunteers to work alongside Sounders players. Sounders FC supporters, youth soccer coaches and players, and civic organizations lead the projects.
- "Ticket Donation Platform" is the way Sounders FC provides the opportunity for fans to donate unused tickets to charitable causes including Big Brothers Big Sisters of Puget Sound and USO Northwest.
- Seattle Sounders FC supports "MLS Works". It is the MLS community outreach program that is dedicated to addressing current social issues is a platform for league and club philanthropic programs.

[The following sustainability information found at http://www.centurylinkfield.com/defend-your-turf/]

# **Environmental Sustainability**

- Comprehensive Sustainability Initiative- "Defend your Turf" was created in
  partnership with McKinstry to sustain an energy conservation program. The
  conservation effort involves mechanical system upgrades, landfill diversion, solar
  panel installation, high-efficiency lighting, and ultra-low flow water features.
  This initiative is tied to CenturyLink Stadium, the site for both the Seattle
  Sounders FC and Seattle Seahawks.
- Landfill Diversion: In 2014, 96% of waste was diverted from landfill. 100% of food containers are compostable and all plastic bottles are recyclable.
- Water Conservation: 100% of the urinals were retrofitted to include ultra-low flow water fixtures, saving more than 1.4 million gallons of water each year. Less water also means less CO2 emissions and less energy- the equivalent of planting 278 football fields worth of trees.
- Green Cleaning: 94% of cleaning supplies are green seal certified, significantly reducing the chemical-based cleaning agents used.
- Energy Efficiency: Solar panels that span two football fields atop CenturyLink Stadium provide 25% of the energy needs of the stadium. Arch lighting has been comprehensively converted to programmable LEDs- resulting in significant energy savings.
- Sustainable Transportation: CenturyLink Stadium has achieved 32% of attendees using public transportation to the site. The stadium and its teams, continue to market the benefits of the train, bus, biking, or carpooling with other fans to drive that percentage higher still. Six electric car-charging stations have been installed in the parking lots.
- Food donation: Each game day, food is donated to Food Lifeline and Operation Sack Lunch: in 2011, 4600 individual meals were donated.
- Sustainability Partners: Anheuser Busch, Starbucks, Coca-Cola, Puget Sound Energy, and McKinstry provide a vital sustainability alliance in the stadium.

Seattle Sounders FC, Seattle Seahawks, and CenturyLink Stadium, were all founding partners of the Green Sports Alliance.

#### F. San Francisco 49ers

One of the most storied franchises in the NFL, the 49ers are known for their dominance in the 80s and 90s and for producing timeless heroes of football in Joe Montana, Steve Young, and Jerry Rice, to name a few. Currently, the San Francisco franchise is known for its impressive new stadium, Levi's Stadium. The site in Santa Clara just hosted the landmark Super Bowl 50 thanks in large part to the cutting edge nature of the stadium and its array of sustainability features. An organization that is on the front edges in terms of a new stadium and progressive sustainability initiatives is usually on the short list to host such mega events. Hosting such an event can be an economic boom for the host city and organization.

## Onsite Rooftop Farm

- The 49ers use of their roof: including the sustainable farm and the solar energy, is an effort that is certainly innovative.
- 4000 square foot garden that contains 40 different crops: herbs, vegetables, and a variety of plants native to the Bay area.
- The farm is expected to produce 150 pounds of crops that will be cooked and served in club spaces and private events in the stadium.
- "Faithful Farm" is maintained by San Francisco based Farmscape and is the first rooftop farm in the NFL.
- Some benefits include reducing the heating and cooling costs in the suite tower and minimizing the carbon footprint by decreasing the reliance on outside food vendors.
- Some produce will be given to the Salvation Army to assist those in need.
- 12 months of sunshine each year make the farm endeavor a no-brainer.

Farm-to-Table concessions: the rooftop farm assists the stadium's goal of providing farm-to-table menus for fans, along with partnering with local suppliers toward this goal.

#### Solar Energy

- Contained on the site of the rooftop farm is the 27,000 square foot Green Roof with 49 solar arrays, operated by NRG.
- 3 energy solar-paneled pedestrian bridges.
- This area also contains solar panels on top of the suite tower- the NRG Solar Terrace.
- The stadium self-consumes PV-electricity generated from the pedestrian bridges and the solar terrace.
- NFL Game Days at the stadium are powered not by the grid, but by the sun.

#### Sustainable Transportation

• The site is sustainable and has a convenient bike path and a public transportation option to lower carbon emissions.

• EVgo charging stations at the stadium.

#### Water Conservation

- Stadium uses reclaimed water for both potable and non-potable uses, such as field irrigation, landscaping, and bathrooms.
- Laying down artificial turf around the playing surface has lessened the water needed for those areas 30%.
- Invested in power-washing tools in order to increase the ratio of power to water for cleaning purposes, in place of distributing one-inch hoses throughout.

# Sustainable & Efficient Technology

- A dedicated mobile app for parking, concessions, and ticketing.
- State-of-the-art fan Wi-Fi with one access point per 100 seats.
- 40GB per second Internet capacity- a first for a US stadium.
- In-event closed-captioning via mobile web.

# Energy Efficiency

- Comprehensive LED light installation.
- Intentional clustering of premium seating together to condense the energy used.

Use less paper: Incorporated paperless ticketing

# Landfill Diversion

- Comprehensive recycling and composting programs in the stadium; concessionaires are trained on both processes as well.
- The 49ers provide tailgaters with a kit complete with bags for landfill waste, recycling, and composting.
- At the stadium, 64% of consumer waste is recycled and 84% of durable goods are recycled.

# Reclaiming resources

- 100% of the wood used in the Citrix Owners Suites was reclaimed from a local airplane hangar at Moffett Field in Mountain View, California.
- The stadium used recycled and reclaimed building materials whenever possible.

# III. Sustainability Scorecards

A. Council for Responsible Sport

[The following information found at http://www.councilforresponsiblesport.org/about-crs-2/]

Founded in 2007, the Council's goal was to foster responsibly sourced sports events. The council offers services to support, certify and celebrate responsibly sourced sports events in hopes that these events become the norm

- 1. Background
  - a. We support event organizers who strive to produce socially and environmentally responsible events through hands-on coaching and a variety of support group programs.
  - b. We certify responsible event production practices through our certification program.
  - c. We actively celebrate events that have become certified by the Council.
- 2. Mission
  - a. The mission of the Council for Responsible Sport is to provide objective, independent verification of the socially and environmentally responsible work event organizers are doing, and to actively support event organizers who strive to make a difference in their communities. The Council for Responsible Sport is an Oregon-based 501(c)(3) nonprofit organization.
- 3. "Where Do We Stand" spreadsheet
  - a. See filled spreadsheet for LAFC separately.
- B. Leadership in Energy & Environmental Design-LEED [The following information found at http://leed.usgbc.org/leed.html]
  - 1. Most widely used green building rating system in the world.
  - 2. Independent verification of buildings for design, construction, operation, and maintenance for resource-efficiency, high-performance, health, and cost-effectiveness.
  - 3. LEED Scorecard
    - a. See filled spreadsheet for LAFC separately.

#### **IV. LAFC Facility Management**

LAFC and Banc of California Stadium wish to maximize their sustainability targets. I assess where LAFC can achieve this in more detail as the stadium is newly under construction. I use the Greening Advisor document by Green Sports Alliance to frame my analysis and the different sustainability categories. The Greening Advisor is a useful tool as it customizes the sport and league in question. I also use the Council for Responsible Sport's (CRS) Where We Stand sustainability scorecard as a reference for measurable performance. 11

# Establish an Organization-Wide Environmental Policy

A comprehensive environmental policy, supported by every facet of the LAFC organization is paramount to achieving sustainability goals. Much like setting forth a mission statement, an environmental policy must be declared and supported by the organization. It is also necessary that every facet of the organization is educated on the policy. The education can promote employee buy-in, which in turn, can inspire fans and stakeholders to more sustainable habits and actions. From the policy, goals can be set as annual targets.

It is important that the goals are selected in categories that are pertinent to the personality of the organization and applicable to the city or region in which the team operates. The policy and goals must be challenging yet attainable. As an example, LAFC as an expansion team operating in sustainability-delayed Los Angeles should not declare a goal to be the most sustainable MLS organization in its inaugural season. The policy and goals should only be decided upon after thorough research of the sustainability elements that existing teams are adopting and with what level of success. In general, LA is a city that lags behind fellow west coast cities San Jose, Portland, and Seattle when it comes to sustainability. One goal that is appropriate in year one for LAFC is to set 60% landfill diversion rate. This rate requires LAFC to have a legitimate and organized system in place for recycling and composting in order to reach this percentage, and this percentage is achievable for year one. The 60% diversion also earns one certification point toward in the Council for Responsible Sport's Where We Stand scorecard. Another element LAFC must adopt year one is a strong water conservation program. The water conservation program must include a gray water system whereby water is reused for landscaping and bathrooms. Furthermore, 100% waterless urinals and motion activated sinks are essential to not wasting precious water. These initiatives also garner points for the Where We Stand scorecard.

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<sup>10</sup> http://mls.greensports.org/

<sup>&</sup>lt;sup>11</sup>http://www.councilforresponsiblesport.org/wpcontent/uploads/2016/02/4.2\_AllCredits\_List.pdf

#### **Involve Your Supply Chain**

Including the supply chain in your sustainability performance is key. LAFC must ensure that vendors become fluent in the processes of composting and recycling. The vendors cannot only be sustainable with food and accessory disposal behind the scenes, for they can also act as a guide and educator of fans to make sure the fans know how they can go about composting their food scraps and concession accessories. The tracking of performance as it pertains to composting, recycling, to energy efficiency and water conservation is a motivating factor for all those people who work directly in the affected areas. The tracking of landfill diversion performance scores one point, per section 3.2 of "Where We Stand." Some other point scoring initiatives include a composting program, hitting 60% diversion rate, and hosting a boot donation event for those in need. Each of these aforementioned elements receive one point and can be found in sections 3.3, 3.4, and 3.5, respectively, in the scorecard. The landscaping and field maintenance team must know the organization's plan for water conservation and the data must be tracked (more on that specifically in section V) to encourage optimal performance in the category.

Similarly, involving Waste Management in the annual goals of landfill diversion percentages can create accountability for LAFC to achieve those percentages. Again, LAFC can set a 60% goal for year one and receive one point. LAFC would receive an additional point at 75%, but this is far-fetched in year one. The Seattle Sounders are above 95% today. However, 2016 is the Sounders 8<sup>th</sup> year of their MLS life and Seattle is known for being the most sustainable city in the US. Their collaborative company, Council for Responsible Sport, can help in ways to reduce game day waste and boost sustainability to meet organizational goals. Waste Management can also be a great resource for counsel on how an organization can maximize its landfill diversion figures as well. In the end, Waste Management will not only be a partner in recycling, composting and landfill waste, it will also act as auditor by measuring the loads of the 3 types of waste.

Another great example of including the supply chain is by engaging with Southern California Edison for energy efficiency. An initial meeting can be useful to share goals and ideas for energy efficiency. SCE will also be vital in tracking energy usage by LAFC. Particularly in LA, peak energy usage is a serious problem. Any way LAFC can avoid heavy use during peak hours (especially during games) is monetarily rewarded by SCE. Furthermore, this avoidance eliminates the possibility of a blackout during a game, something the LA Galaxy experienced a few seasons ago. This PR embarrassment inspired the Galaxy to pursue and take action on investing in storable energy by employing Tesla to input Powerpacks onsite.<sup>12</sup> Such sustainability ambition and creativity should be emulated by LAFC.

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 $<sup>^{12}\</sup> http://www.sporttechie.com/2016/08/23/green/aeg-brings-energy-storage-to-lass$ tubhub-center-with-tesla-powerpacks/

# **Have an Energy Audit Performed**

Having an energy audit performed is necessary to see where LAFC's baseline is- to gauge improvement with energy efficiency. Without the specific data, it will also be a vague endeavor to try to guess where the energy performance is for the organization. Once the audit is performed, it can show specifics like peak usage and the total amount of energy used. Furthermore, the audit is helpful after the stadium is built in order to continually find ways to reduce energy consumption and waste. With this info, the team is equipped to improve efficiency.

A great place to start with energy efficiency is to eliminate wasteful energy. Items like lighting in unoccupied areas like bathrooms and parking garages can save an immense amount of energy by employing a motion activated lighting system. A more ambitious idea is to invest in solar power. Solar power is obvious in sun-soaked southern California, but it takes initiative to put the original money in. Like many sustainability elements, the initial investment can seem daunting, but it is the subsequent and long lasting savings once the system is in place that ends up helping the bottom line immensely. The energy audit and the results showing just how much the electrical grid is exploited by large sports organizations can help inspire organizations toward remedies like solar power.

# **Start Tracking Your Progress**

Progress tracking is essentially the benefit and second stage of the energy audit. Progress tracking can be motivating for the entire organization. For LAFC in particular, as a new expansion team, the first year with legitimate sustainability goals can really inspire the organization for subsequent years. The trajectory of the sustainability elements like recycling and composting, energy efficiency, water conservation, sustainable transportation- all should be based on research that first year organizations achieve with sustainability goals. The set goals for things like percentages of landfill diversion would also be partially based on the region and the general sustainability attitude of the city or region.

The tracking must be consistent and must be shared with all employees. The tracking can certainly act as a reminder that the organization must improve its efforts for items like energy efficiency and landfill diversion. Whether positive or negative, the act of tracking creates accountability for the sustainability effort. The tracking also allows the organization to share its improvement with fans and stakeholders. The data shared legitimizes the sustainability effort in the eyes of the public. Showing the progress, especially in eye-catching ways, can impress and inspire fans to join the greater sustainability effort alongside their team and in their personal lives as well.

# **Recycle More**

Recycling is the low hanging fruit in sustainability. Recycling more can improve an organization's CRS certification level. Today there is really no excuse for not recycling everything applicable. A more ambitious 5 year or 7 year plan should include a Zero-Waste program. It is important to be realistic with the Zero-Waste end goal. LAFC would be foolish to employ a Zero Waste program out of the gate or even in less than 5 years. It is important that all vendors are also on board with the elements that count toward LEED and CRS certification like recycling. This way, the vendors can also recycle to make sure that the overall effort is maximized. Tracking and disclosing the improvement of recycling, again, can really inspire fans to ramp up their own recycling because recycling is the most basic sustainability exercise on which the general public has the strongest grasp.

#### **Reduce Water Use**

For LAFC, water conservation should get the sustainability conversation started. Even for those who may not be on board with the sustainability movement, in LA, saving water, now, is about basic survival. The drought has gotten so severe; that there are regulations and harsh financial penalties for using more water than is deemed necessary-and everyone obeys rules when breaking the rules costs money. LEED and CRS certification levels will be helped immensely with built-in items in the stadium such as waterless urinals, motion activated sinks, and gray water systems that reuse water for non-potable uses like landscaping. These sorts of water conservation elements are an obvious money saver over the life of the hardware that is put in place. The money saved and the millions of gallons of water saved annually will convince nearly everyone to support the initiative. Such water conservation innovations are becoming more common in stadia worldwide. When one considers how pointless it is to flush 3 gallons of water down a urinal when there is an option where zero water gets flushed, the old way becomes silly.

#### **Use Less and Better Paper**

For the 2016 season, the Seattle Sounders incorporated a 100% digital ticketing system. The amount of paper saved by this bold decision is unreal. There are no statistics yet given that this is year one of the initiative, yet one can tally that 25 home games at 45,000 fans per game where no paper tickets are distributed, the rough math reaches over 1 million paper tickets saved. Sure, this was a significant change for the fans, but the Sounders believe strongly enough in doing what is best for the Earth, that the team invited the fans to join their crusade. The Pacific Northwest is known for being on the front edge of the sustainability push. This is one example that is indicative of this idea. The match programs are only found digitally as well. LAFC must decide whether such a bold move is feasible for their team brand and their fans. One benefit would be that the team would not be changing a dated paper ticketing system, but simply starting with a cutting edge one.

Bathroom paper use can easily be avoided by purchasing air dryers at the sinks. If and when paper is deemed the choice, it is vital that the paper is not used frivolously, and that it is harvested from certified sustainable forests. The paper dilemma is also an action that can have the strongest impact in the office setting of the sports organization. Simple habits like really thinking about whether printing documents out is absolutely necessary can save countless trees. The leadership in an office can set the tone for the importance of saving paper, but it is also important that all employees take ownership of doing their part for the cause. Paper is a vital natural resource that does not get the attention that the more well known endangered species like water and energy receive, but it is still essential to limit using and abusing paper and trees.

#### **Donate Food**

One aspect of food sustainability that gets overlooked is donation. Food donation is the most efficient use of leftover food. The LA Regional Food Bank is one logical partner option for LAFC. This food bank is well known and reputable and would act as an easy recipient for LAFC to donate its unused food on game days. Certainly, composting of leftovers is a great option for landfill diversion. However, having the unwanted food nourish those in need in the community is optimal. Partnering with a shelter of some kind in the community is worthwhile in this way. LAFC can gain credibility in the community with this effort. Positive PR is always useful for a professional sports organization, especially a brand new one. Including the concession vendors, and really the entire chain that is involved with the food, is important for food donation. The supply chain must be in the loop, so the workers can effectively manage and package the leftover food, so it can be donated easily. LAFC must identify and partner with food vendors who share the same vision for food donation to make the overall effort a cohesive one. Again, tracking the amount of food donated each match day and each season is important for authenticity and validating the effort to the public.

# **Switch to Green Cleaning Products**

To clean a stadium, concessions, bathrooms, concourses, etc., requires a lot of potentially harmful chemicals to the environment. With proper research, LAFC must purchase environmentally friendly cleaning products, comprehensively. The up-front cost of purchasing all-natural or environmentally friendly cleaning products up front can seem expensive, which is true relative to the cheaper and more damaging products. However, it is easy to maintain the environmentally friendly cleaning products once the brands and types of product are identified initially. Customarily, each product is marginally more expensive than the ones that are not friendly to the environment. A partnership with Seventh Generation would make sense practically and from a PR standpoint. LAFC could let Seventh Generation be its mentor on how to incorporate comprehensive green cleaning in the stadium as well.

#### **Choose Green Energy**

Green energy is another vital initiative organizations must adopt in order to achieve a higher certification through LEED or CRS. Green energy can be classified as renewable or sustainable energy. Solar energy, energy efficient appliances, LED light usage etc., all apply. Depending on the specific energy needed, it is important that the organization use its discretion to apply the applicable green energy solution. In LA, solar energy is an obvious choice for green energy given the climate. This effort by LAFC should therefore be comprehensive. The LA Galaxy are investing in storable energy with Tesla to avoid losing power during matches. This embarrassing event occurred two seasons ago during a nationally televised game. These outages are somewhat frequent due to the grid being overloaded during peak use times. "In January 2016 StubHub Center installed 20 Tesla Powerpack commercial batteries for the purpose of shifting usage from peak to non-peak periods and to reduce event-related demand spikes, becoming the first stadium to have energy storage on site." "13

Another easy way to garner points toward CRS and LEED would be to ensure that all appliances are energy star rated, such as washers and dryers. Another item that could fall under the umbrella of green energy is simple energy efficiency. Following the lead of The San Jose Earthquakes and Portland Timbers: energy efficiency elements like motion activated lights in areas like bathrooms and parking lots and the comprehensive install of LED lights are applicable. Even clever habits like turning lights off when the stadium is not in use, goes a long way to making sure the facility is not wasting resources and money on energy.

# **Summary of Facility Management**

LAFC must attain every point it can to achieve the highest CRS and LEED certification that is feasible. Some of the initiatives I described above add up to a total of CRP 46 points. This total is up 9 points from where the club appeared to be previously, and accomplishes CRP Gold status. My tally for LAFC's LEED scorecard reveals that Platinum status is achievable for the stadium. As an expansion team that must build its own stadium from scratch, in a massive global city such as Los Angeles, there are simply no excuses to cut corners or to leave out practical sustainability initiatives. The Greening Advisor document by the Green Sports Alliance was instrumental in framing my assessment of how and where LAFC could increase their sustainability certification. The Council for Responsible Sport's Where We Stand scorecard was also useful in tracking sustainability points. Every sustainability category above is worthy of LAFC's attention. My hope is that LAFC views their inaugural season as an opportunity to be a sustainability leader in the professional sports industry.

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<sup>&</sup>lt;sup>13</sup> http://www.sporttechie.com/2016/08/23/green/aeg-brings-energy-storage-to-las-stubhub-center-with-tesla-powerpacks/

#### V. LAFC Operations Management Plan

The operations pertaining to this section is the total of all the LAFC matches at Banc of California Stadium in Los Angeles, California and the management of the stadium. The stadium is currently under construction and will seat 22,000 spectators in a soccerspecific outdoor venue. The stadium sits on the former site of the LA Sports Arena. After completing the "Where We Stand" assessment form: CRP gold status is achievable for LAFC. This section will detail where and how LAFC can achieve CRP gold status as it relates to their operations management.

# **Planning and Communications**

The foundation for an organization's sustainability effort is putting a formal plan in place. This plan outlines the goals for both environmental and social initiatives. Once this comprehensive plan is drafted, the next step is to disclose the plan to the public. This act not only notifies the public, local or otherwise, it also sets the stage for accountability to occur between the organization and its fans and stakeholders. The plan must also outline the fact that all applicable facets will be measured to promote accountability and goal-achievement. This plan must incorporate the formation of a "Green Team." The Green Team must include employees from all branches of LAFC. This way, the effort can truly be comprehensive and authentic and all employees can have a sense of ownership of the sustainability campaign.

The selection of the stadium site is a category for sustainability. LAFC's Banc of California site was selected for a plethora of reasons, but one of the primary ones was to accommodate the convenience of traveling for fans in the middle of a high traffic area of the second most populated city in the US. The stadium will be comprehensively ADA compliant. LAFC has expressed interest in getting fan and stakeholder insight about the sustainability effort. The preferred method of doing this is through focus groups. Focus groups would again be the chosen method for LAFC to solicit opinions on the community impact of the organization. These focus groups will discuss the foundational expectations of what LAFC will do from a sustainability perspective- which elements will be included and to what extent. An example would be what percentage of landfill diversion will be achieved year one, two and three. The focus groups will also dialogue about the expected efforts and impact LAFC will have on the immediate communitymore pertaining to social responsibility- food donation, providing affordable attendance to underprivileged citizens, the building of green spaces in the community, etc. Once the sustainability report is complete, it will be published for the public to review. Sustainable food and beverage options will be offered to fans. Organic and locally sourced foods will be a priority for LAFC to select a food and beverage vendor. As always, safety and security will be a paramount priority for LAFC. The security and safety plan will be thoroughly researched and mapped out for all visitors to Banc of California stadium. Finally, LAFC will organize outings and events to educate youth and engage them with environmental and sustainability initiatives.

#### **Procurement**

LAFC will draft a sustainable procurement policy. This policy will include the vendors, partners, and other outfits that collaborate with LAFC on match days in order to improve the sustainability of the waste, giveaways, printed material, etc. Furthermore, online/digital formats will be relied upon in order to minimize using paper, in all feasible scenarios. Such scenarios can be promos, ticketing, match programs, use of apps, all communication with fans and stakeholders, and so on. LAFC is inspired by organizations like the Sacramento Kings who have an aggressive local food-sourcing program. All food and beverage vendors linked with the Kings operate within 150 miles of the stadium. Similarly, LAFC will make a concerted effort to utilize locally sourced, organically grown, fair trade certified, sustainably produced food and beverages. The target will be 50% of all food and beverage will be sourced from these vendors, garnering two points in the Where We Stand assessment.

Sustainable procurement is important to LAFC. LAFC will partner with no less than one local business for their services to aide the local community and economy. Furthermore, LAFC will market the sustainability of branded merchandise. This message will be constant throughout each season. Finally, LAFC will seek out viable minority owned or women owned businesses with which to operate. This effort should be quite easy, given the melting pot of cultures that reside in LA.

# Resource Management (Energy & Carbon, Waste Management, Other)

Landfill diversion will be a key point of emphasis for LAFC. In partnership with Waste Management, a comprehensive recycling and composting effort will be in place. Again, Council for Responsible Sport dictates that one point will be awarded for the benchmarks of 60%, 75%, and 90% diversion rate. Up to three more points can be earned by incorporating specific initiatives like a boot collection and donation event, a food donation program, and educating the community about waste diversion efforts. The water use category has a similar breakdown: one point for measuring water use and up to 3 additional points from a list of various water conserving measures. Finally, carbon emissions also achieves points by calculating the carbon footprint and additional points for offsetting 25% of that footprint, providing subsidized or free mass transit, and offering a bike valet. LAFC employees, fans, and all vendors will be in the loop as to the specifics of both endeavors. Waste Management all ready does a great job of tracking the amount of all the types of waste for their clients. LAFC will utilize this tracking in order to monitor their own progress as well as to educate and inspire fans to continue their sustainability effort in partnership with LAFC. Landfill diversion will be a key part of the tracking effort and all recycling and composting will be framed around landfill diversion numbers. LAFC will set up a zero-waste goal, but they will do so in an achievable timeline of 5-7 years. I would recommend year one 60% diversion goal, and an increase of 10% each year, with year 5 just a 5% increase and years 6 and beyond the goal should be to get closer to 100% each season in small increments. Interim years will have target progression numbers in terms of percentages of landfill diversion. Where We Stand sets out one point each for 60% diversion, 75%, and 90%.

A boot and shoe collection and donation program will be organized by LAFC annually. This is all ready a popular manner of charitable donation for MLS teams, given the common item of soccer cleats. The cleats and shoes will be donated to local underprivileged shelters or organizations. In addition, LAFC will have a substantial food donation program. All concession vendors will be educated and trained on the best practices to maximize food donation rather than discarding leftover foods. Such food donation can be continuing sustenance for the homeless or those underprivileged in the LA area. Hand in hand with the food donation effort will be an education effort of the fans to inspire them toward landfill diversion efforts in the stadium and in their own homes.

Water conservation is serious in southern California. As a result, water conservation should be LAFC's #1 sustainability focus. The water company will be a vital ally in the effort- especially in terms of tracking water conserved. One initiative that satisfies the category of minimizing wastewater or runoff is the gray water system LAFC will employ. In such a system, water will be reused for non-potable uses like toilets and irrigation. Another manner the team can gain CRS points is by raising awareness of local water related issues. This effort would be easy because it is front-of-mind for southern California citizens and the epic drought gives ample ways to motivate water conservation efforts. This effort could naturally flow into another category of raising general water conservation efforts, not simply local ones. An initiative where LAFC could receive an innovation point is by outfitting all urinals in the stadium to be waterless. This is becoming the trend and it would be relatively easy to institute given that there is no existing stadium, hence no retrofitting of conventional water urinals.

Energy and Carbon management is another key aspect of the sustainability campaign. LAFC will start at the logical place of monitoring the carbon footprint for several aspects of match days. These aspects include the event itself in the stadium, local travel, and purchased energy. This category itself will garner LAFC two points toward Gold certification of Council for Responsible Sport's 'Where We Stand.' LAFC will aim for offsetting 25% of carbon emissions on match days. While there are more points available for increased percentages, 25% is the one that is realistic year one. Metrolink is all ready stationed conveniently close to the stadium. LAFC will work in tandem with Metrolink to create engaging and effective incentives to motivate fans to utilize this sustainable mode of transportation. The obvious incentive is discounted concessions coupons to all Metrolink riders. LAFC will also provide a bike valet service with a similar incentive program- granting discounted concessions for those who utilize this extremely environmentally friendly mode of transport. In fact, the stadium build includes a bike path around the periphery to encourage bicycling. LA Solar is a well-known solar energy company that LAFC can partner with to satisfy the category of local offset provider. Whether LA Solar is selected or a different local outfit, LAFC will select one to help support the local economy while also supporting the energy efficiency effort.

# **Access & Equity**

As mentioned in brief earlier, the stadium will be in complete ADA compliance. LAFC is also conscious of making the game day experience, and the brand as a whole, welcoming and accommodating to all minorities as well. The organization is passionate about partnering with local underprivileged groups and associations to provide supremely affordable options for those who would otherwise not be able to afford an LAFC soccer experience. This partnership would also include regular outings and opportunities for team players and staff to engage with youth in the local community. Soccer is an easy avenue to bring communities together. Part of the health and well-being effort by LAFC will be using the most effective and healthy ways to train and play soccer. LAFC can borrow a practice by the San Jose Earthquakes by forming a long-standing fund to provide scholarships to young people. Items like 50-50 raffles or auctioning autographed or team gear are just two great ways to raise money for such a great cause. Finally, the organization will also be thorough and hands-on with their approach to access and equity by holding an employee training session to educate the staff on these important topics.

# **Community Legacy**

The overall positive impression LAFC creates in the local community is important to the organization. This positive impact on the community will include creating jobs for the local community and economy, landfill diversion, partnership with local homeless shelters, food donation programs, and partnering with schools and other youth organizations to enrich their lives with opportunities they would not otherwise get without LAFC. LAFC will start any search for partners, sponsors, and vendors with local businesses in order to reinforce the local economy and relationships. The aforementioned tracking of sustainability performance will be assisted with the partnership of local government to disclose annual performance and to provide 3<sup>rd</sup> party accountability. A community legacy project will be initiated by LAFC. Such a project can include a tree planting initiative or a perpetual scholarship fund. LAFC will regularly host community outreach projects, welcoming all volunteers to engage in park cleanup, beach cleanup, tree planting, playground building for a school, etc.

#### **Summary of Operations Management**

LAFC is passionate about enriching the local community, socially and environmentally. Banc of California Stadium will be the site of all the sustainability initiatives. The "Where We Stand" document along with the narrative above expanding on all the categories where LAFC can receive certification points, guide the reader to see that Council for Responsible Sport Gold status is indeed achievable with a concerted effort.