



NW BUSINESS CONFERENCE & EXPO OCT. 25TH

# BUSINESS PULSE

MAGAZINE

FALL 2017



**MR. DOWNTOWN**  
Bob Hall, helps revitalize Bellingham business.

## \$1.4 BILLION INDUSTRY

### Innovative Agribusiness More than just crops and cows

Why the Nov. 7 election is imperative?

**WBA MEMBERS**  
lead environmental stewardship by example

Meet the Professional Business Women of the Year Finalists

The Publication of The Whatcom Business Journal

The Northwest Plant Company lab uses its cutting-edge heavy R&D resources, local Agribusiness opportunity



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**MARK BUEHRER**

is honey-critical before his dash of repurposed wood at 2020 Engineering where he promotes the latest in low-impact, restorative design concepts. (Photo courtesy of 2020 Engineering)

### 14 '2020' VISION IN 1994 COMES TO FRUITION FOR MARK & JESSIE BUEHRER ALL OVER THE WORLD

**BELLINGHAM CIVIL ENGINEERING AND LED lighting firm's** latest consults stretch from Bellingham Downtown Waterfront Gateway project to Tokyo, Japan, with a Belize-area resort by Leo "Francis" DiCaprio in between. Mark carved a leading-edge niche before 'green building' was a phrase, and he leads the LEEDers.

### 38 LOCAL COMPANIES FIND MANY PATHS TO ENVIRO-CONSCIENTIOUSNESS

**REUSED EQUIPMENT AVOIDS LANDFILL.** Centralized dispatch eases on roads. Tonic-free cleaning. Weed assessment. Local sourcing makes less travel. Toward Zero Waste (TZW). Whatcom Smart Tips. Doing their all to eliminate carbon footprint.

### 30 BOOM!-TOWN: NO DOWNTURN FOR DOWNTOWN... RATHER, IT'S A BIT OF A REDUX RENAISSANCE

**WHEN SOME FORMER LONGTIME** Bellingham companies closed their doors, it left one to wonder if a trend had set in. Quite the contrary. Thanks to some spiffy natural do-overs of old, old Bellingham buildings by Bob Hall, and enough uptick in the economy to inspire some new companies to open, the city center is alive and well.

### 84 GUEST COLUMNS: WASHINGTON POLICY CENTER WOKKS WEIGH IN

**MEATY FOOD FOR THOUGHT!** addresses state income tax (illegal), state travel tax (disputed), state methane-benefits (QI offset), and recycling attempts to thwart climate change (QI overworld). With a little agribusiness analysis thrown in the good measure.

# 2020 Engineering Pioneers Sustainability and Green Building Movement



**Nature inspires company  
founder Mark Buehrer's  
vision for sustainable design**

by Tamara Anderson-Loucks

enr.com | 11



Living wall watered by recycled graywater. (Photo courtesy Arch Nexus Architects.)

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**THE RECEPTION DESK** in the foreground exemplifies the approach to design at 2020 Engineering and 2020 LED Lighting, whose owners credit both the firm's Mark and Jessie Buchner. To their left, a table replicated the details of used blue downstaircase with its natural shape. To their right, the reception desk and display table were designed to form work surfaces and storage. The table's details would be revised during construction of some rooms were moved, changed, or built in for space. (Photo courtesy of 2020 Engineering)

**A** passion for nature and a belief that civil infrastructure and design can enhance the environment provided the inspiration for 2020 Engineering, founded in 1995 by Mark Buchner. And 17 years later Mark and his wife Jessie started LED Lighting.

An early roster of sustainable design and green building, 2020 Engineering in Bellingham pioneered the sustainable construction and business development movement here in the Evergreen State.

"When I named the company, 2020 referred to the beautiful insights I believed sustainable design could have on water and transportation systems by the year 2030," Buchner said.

Early in his career Buchner, a professional engineer, worked for the U.S. Department of Transportation. He then moved to Juneau, Alaska, where he helped design the downtown street corridors near the cruise ship dock built for the World's Fair in 1986. He moved to Bellingham in 1987 and worked as a consultant for land development and engineering firms.

"Over the years, I grew frustrated with conventional design. I didn't think protection of the environment or leading vibrant, livable communities was what you see, from roadways, bridges, and parks to water and sewer systems. I had a real itch to say civil engineering vision — an architect's perspective for creativity in design — and I felt we should use nature as a guide for design, particularly in terms of water and transportation systems."

By the year 2000, as a small-scale contractor, designing residential projects and small-scale systems



Example of typical steel water tower in region (in water). Clients may be a viable alternative to water for properties affected by the fiber depletion. (Photo courtesy of 2020 Engineering)

when "sustainability" was not yet part of the language of the end. Today, he said. "Our name has evolved over time, but to the U.S. and in other countries..." to a civil engineering firm specializing in sustainable, integrated design.

#### CHALLENGES OF EARLY ADOPTION

At its inception 2020 Engineering was the only civil engineering company in Washington that set an environmentally design, yet, Buchner said, clients weren't looking to do more sustainability, low-cost design, and green building, weren't the

norm in the '90s, so it took time to find willing clients for his concepts and grow the company.

**"You can now build a LEED Platinum-certified building ... at the same cost as conventional construction methods."**

Mark Buchner, founder  
2020 Engineering/2020 LED Lighting

In the late '90s, LEED certification came about, and 2020 Engineering immediately accepted to

be the first of the movement. Buchner said 2020 were integral to the development of Seattle's first Leadership in Energy and Environmental Design (LEED) certified green building. Developed by the U.S. Green Building Council (USGBC) in 1998, LEED is a national certification system established to encourage the construction of energy and resource-efficient buildings that are healthy to live and work in.

"From there, as clients started asking our name when projects came up that required expertise in sustainability, through our work wasn't until the '90s," Buchner said. "That led to projects through

out the USA, and eventually internationally as well. Today, 80 percent of our projects are located outside of Whatcom County.

Moving into the 2000s, as acceptance of sustainable design and green building practices continued to grow and technologies developed, permitting did not keep pace with advancements.

Buehler explained why. "Early regulations were put into place to prevent bad designers and builders from doing bad things, but once they often caused roadblocks for alternative projects," he said. "We've spent a lot of time working with agencies to help develop new standards that pave the way for sustainable practices and low-impact developments."

As of Jan. 1, 2017, Washington state law requires that developers follow low-impact development standards for all new projects, which, among innumerable benefits, decreases water and energy use.

#### IT PAYS TO GO GREEN

"Twenty years ago sustainable building was more expensive and benefit's weren't as recognized as they are now. In the last five years the industry has caught up, and services and construction supplies are affordable. Buehler says you can now build an LEED Platinum-certified building — the highest rating for green buildings — at the same cost as conventional construction methods.

Buehler noted that less upper middle class money for developers and builders, particularly those who retain ownership of their projects, to incorporate sustainable alternatives into creating them.

"Some projects realize cost savings on both ends," he said. "During the construction phase with lower building costs and permitting fees, and afterwards in terms of lower utility bills from reduced energy and water use."

"For example, it's less expensive to build an onsite water treatment system that will recycle the water

back into the same building than to build the mechanical systems to pipe water out to wastewater treatment facilities. Portable water can be filtered and reused. Non-potable can be reused for irrigation."

A prime example among 2020's projects over time was when Whatcom County in Bellingham completely

**"Early regulations were put into place to prevent bad designers and builders from doing bad things, and they often caused roadblocks for alternative projects. We've spent a lot of time working with agencies to help develop new standards that pave the way for sustainable practices and low-impact developments."**

—Mark Buehler, founder  
2020 Engineering/2020 LED Lighting

overhauled its property on Iowa Street several years back. They had to address critical issues next to a stream, Buehler said. "It used to be at one time an old, contaminated strip of land," he said. "We produced a low-impact development (LID)."

Rather than design a conventional water treatment system, 2020 incorporated permeable concrete (porous concrete that allows rainwater to soak through), rain gardens, and water fountains to help filter debris, eliminating the need for a detention pond. By implementing sustainable, low-impact design, the dealership saved over \$150,000 in construction costs.

"We also included work on New Street, the entry level leg into the dealership," Buehler said. "The project involved the

Award for Excellence in Concrete Construction. We've done acres and acres of porous concrete permeable projects at schools and other sites."

Energy-efficient lighting also plays a key role in green building practices, and has benefits beyond lower power bills. Around 2010 when a recession was affecting the economy and the costs of doing business, Buehler and allies that documented how proper lighting increases productivity and the overall health of employees in the workplace.

Further research uncovered that Puget Sound Energy (PSE) offered rebates based on energy savings for businesses that used LED lighting. His interest peaked in 2012. Buehler and his wife, Joelle, founded 2020 LED Lighting.

"Hospitals, schools, municipalities, and corporations were all realizing the health benefits of good lighting," Buehler said. "We recognized there was a good business model here. 2020 LED Lighting was the first U.S.-based company that focused on lighting — both for new construction and retrofit."

Unlike 2020 Engineering, which provides only design and consulting services, 2020 LED Lighting offers both consulting and general contracting services. The company has installed LED lighting systems for several Whatcom County businesses, including a retrofit for the downtown DMCA, the Community Food Group, and Dewey Griffin Square. Buehler explained that the LED lighting cost benefits include an average savings of 80 percent on energy bills, plus replacement of up to 70 percent of the installed load through rebates offered by PSE.

#### THE FUTURE OF SUSTAINABLE BUILDING

Over the last 20 years sustainable design and construction has been an ever-evolving industry, with seemingly no limits in where it can go.

Buehler foresees sustainable water systems as a key focus. He said it's possible to create an efficient infrastructure and building that uses very little water resources by implementing mechanisms like low-flow fixtures, rainwater harvesting systems, and recycling of both potable and non-potable water.

Development of sustainable water systems is becoming increasingly important as water rights continue to be a fierce political, cultural, and legal issue. A local example is the Washington Supreme Court's Hirst Decision, it requires property owners to prove that not a single drop of water would be diverted from customers. Flow meters to measure water usage and fix leaks are required, thereby rendering many properties uninhabitable.

Recently, Buehler made a presentation for the Whatcom County Council on sustainable water resource management concerns. He illustrated how rainwater catchment systems, rather than wells,

can collect sufficient water to sustain small residential and even large commercial projects.

These catchment systems, such as cisterns, on the other hand, are not as viable, he said, which could help property owners whose banks are

**"We need to think about sustainability for the long term. From the aesthetics — the enjoyment we can receive — to the health and environmental benefits, because what we do today is what we will leave behind for our children."**

—Mark Buehler, founder  
2020 Engineering/2020 LED Lighting

extremely underdeveloped under Hirst. He spoke of a property in Stege County, appearing as undevelopable due to Hirst, that recently received a building permit by sub-

mitting plans for a rainwater catchment system in front of a well.

Urban agriculture is also a benefit factor of sustainable water systems. Advancements in aquaponics and hydroponics allow the growing of fresh, organic food in new ways — including within commercial buildings, on rooftop gardens, or in the middle of a thriving downtown corridor, Buehler pointed out.

"Today you can walk down a building's hallway and pick strawberries grown on Irving walls. As the population grows, and land becomes more scarce, alternative systems to grow food will be imperative," he said.

"Cities will need to grow through food within very limited land use production. "It's less expensive and takes less energy than to ship food from 5,000 miles away. The U.S. has the ability to develop technologies that can be shared with Third World countries struggling to feed their populations."

#### BRINGING SUSTAINABILITY HOME

2020 Engineering focuses on many local projects, working with residents in the region to incorporate sustainable design, and consulting on the Bellingham waterfront redevelopment.

"We enjoyed modeling and have been blessed to see how projects we've been involved in throughout the U.S. and internationally have come together," Buehler said. "But I live in Bellingham — the greatest place to live. I want to take what I have learned, and apply it here."

"We need to think about sustainability for the long term, from the aesthetics — the enjoyment we receive — to the health and environmental benefits, because what we do today is what we will leave behind for our children." **BP**

## Actor Leo DiCaprio eco-resort among 2020's global works

Articles over the last couple of years have appeared in the *Wall Street Journal*, the *New York Times*, and elsewhere about actor Leo DiCaprio's passion for the environment. Buehler termed "deep green resorts" introduced to open in January 2020, the most sustainable hotels. Rolex and Rolex & Co. are contributing to the project. Actor Leonardo DiCaprio and a partner bought the island for \$1.5 million and partnered with an architect and design firm to create the resort, called BlackRock Caye, A Restorative Island." The *New York Times* quoted DiCaprio, "The main focus is to do something that will change the world...groundbreaking in the environmental movement...a showcase for what is possible." That article said that a stay at the resort would range up to \$2,295 a night.

On the 2020 roster of projects, many are in Canada, and others as remote as New Zealand, Belize and Tokyo.



## From farm-to table in 12 hours or less

**Proposed Bellingham Organics would provide organic, locally-grown food year-round**

If approved, the proposed Bellingham Organics urban aquaponics facility on ugly Bellingham property in disrepair would bring a whole new perspective on "farm to table fresh" food. The company would serve up fresh, locally-grown organic fish, vegetables, and herbs harvested in the morning, placed on store shelves by afternoon, and on your table that evening for dinner.

Project developer Paul Schlotter of Paul Schlotter Associates Inc. along with Aquacore Environmental, 2020 Engineering, and Westgate Design/Works – all Whatcom County businesses – designed this urban agriculture facility with the intent of providing an energy efficient means to grow and supply organic foods locally.

The state-of-the-art complex would feature a 10,000 square foot, solar powered commercial greenhouse with a closed loop aquaponics system, fed by harvested rain water and capable of producing organic food year-round.

Mark Fisher, the founder of 2020 Engineering, said: "The goal is to construct a self-sufficient, net-zero building, which means it runs on solar power and harvests enough rain water to sustain operations, netting zero draw from the energy grid and city water systems.

"Aquaponics is a combination of fresh water aquaculture (fish/shrimp – protein production) and hydroponics (growing vegetables, greens, and herbs without soil). The nutrient rich water from the aquaculture tanks is used to irrigate and fertilize the plants, and then the water is recycled back to the fish tanks, which creates a closed-loop system."

The project is currently proposed for construction on Holly Street property that once served as the city dump and is now a remediated brownfield. Project proponents submitted a request to the City of Bellingham to lease the land. Once approved, they can start the permitting process.

If developers explained that while they could do this project anywhere, the proposed site would get rid of an eyesore and become a showcase project, exemplifying what could be done on a piece of land that is not suitable for most types of development.

"The benefits of this project reach far beyond simply supplying local organic foods to the area," Schlotter said. "It adds to the tax base, provides jobs, offers educational opportunities, and has potential for commercial signage, like parking. It was conceived as a social enterprise, providing multi-layer benefits to the broader community."



July 21<sup>st</sup>, 2021

Mark Buehrer  
HeartFoods Group, Inc.  
VIA Email

RE: Potential financing for HeartFoods

Mark,

Based on our preliminary conversations about HeartFood's concept to develop integrated food production centers in the Pacific Northwest, Craft3 would be interested in exploring options to finance new locations.

Any potential financing would be based on a full underwriting of both the individual project and the project sponsors.

Respectfully,

A handwritten signature in black ink that reads "Brad Hunter".

Brad Hunter  
Vice President  
Craft3

*This letter is for conversation purposes only and does not constitute or give rise to legally binding obligation or agreement of any kind.*



October 2021

# HEARTFOODS

COMMUNITY FARMS

Transforming Our Food System

Locally grown foods that are good for your heart.

# Objective

## **HeartFoods Community Farms**

Fresh organic foods grown year-round using recycled nutrients, carbon, water and energy from local food wastes.



HEARTFOODS®

# Problem



Short Video Link:

[WHY DO WE NEED TO CHANGE OUR FOOD SYSTEM?](#)

**Current Global Food Supply Chain  
Creates Food Waste**

**Global Food System**



**Must be Transformed**

**1/3 of food  
is wasted**



HEARTFOODS®

# Farm to Fork Economy

## Current Global Food System



**\$ Linear Money Flow \$**

100% of HeartFoods products are sourced and sold within the HeartFoods community.

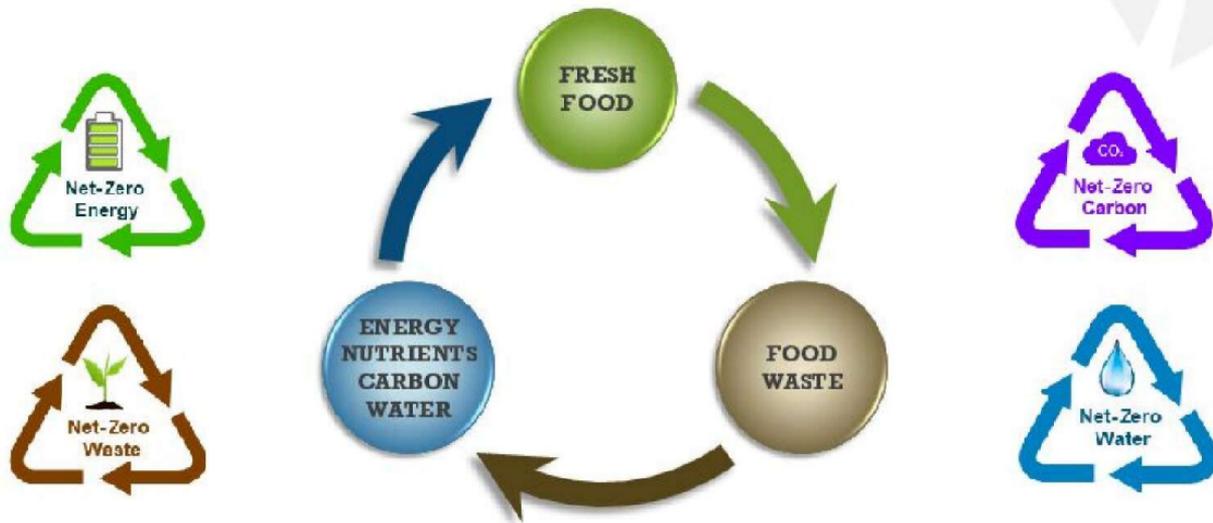
## HEARTFOODS® Food System



**\$ Circular Economy \$**

HEARTFOODS®

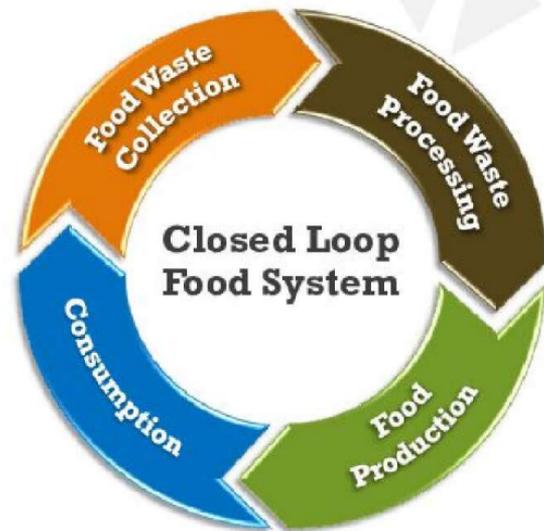
# Net Zero Design



**Closed-Loop Design**  
Energy + Nutrients + CO<sub>2</sub> + Water

## Unique Advantages

- ✓ Agritech & Cleantech Precedent
- ✓ Proven Sustainable Technologies
- ✓ Whole Systems / Integrated Design
- ✓ Provides Local Food Security and Jobs
- ✓ Food Transport Cost Avoidance
- ✓ Proprietary Organic Fertilizers
- ✓ Year-Round Food Freshness & Quality
- ✓ Carbon Capture & Sequestration
- ✓ Replicable Worldwide Locations
- ✓ Stimulate Local “Circular” Economies



# Plant-Based Organic Foods



## Greenhouse & Vertical Food Production

Hydroponics & Aeroponics

\*\*\* Vegetables, Greens, Herbs, Spirulina and Berries \*\*\*



Barramundi (Sea Bass)



Tilapia



Shrimp



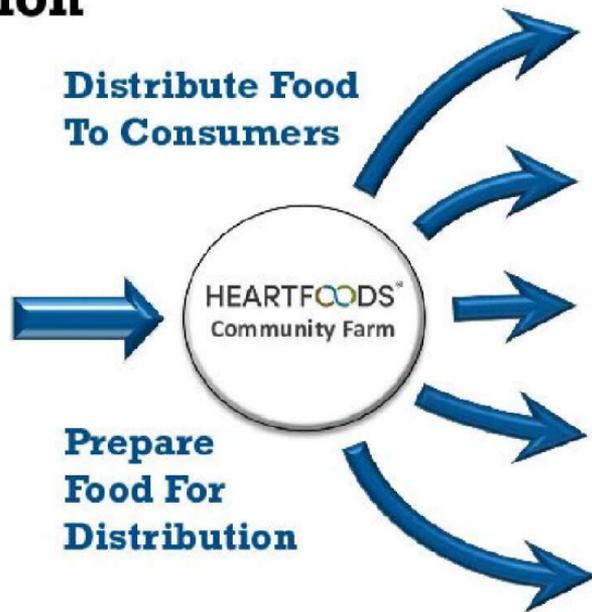
## Recirculating Aquaculture

Fresh Organic Fish & Shrimp

\*\*\* Fed with plant-based aquaculture feeds \*\*\*



# Food Distribution



Grocery/  
Retail



Restaurants,  
Hospitals &  
Schools



Commercial  
Kitchen &  
Cafe



Food  
Trucks



Home  
Delivery  
Services



# Food Waste Collection



Grocery  
/Retail



Restaurants,  
Hospitals &  
Schools



Commercial  
Kitchen &  
Cafe



Food  
Trucks



Home  
Delivery  
Services

**Collect Food  
Waste**

HEARTFOODS<sup>®</sup>  
Community Farm

**Convert  
Food Waste  
To Fertilizer**

Tomatoes

Peppers

Cucumbers

Greens

Herbs

Spirulina

Duckweed

Berries

Shrimp

Barramundi

And more...



HEARTFOODS<sup>®</sup>

# Community Farm “Plug & Play”



# Community Farm Example Campus



# HeartFoods Management Team



**Mark  
Buehrer**

CEO  
Founder & Director



**Jessie  
Buehrer**

CFO  
Founder & Guardian



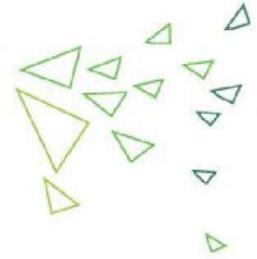
**Karl  
Thomas**

Business Development  
Facilities Operations



**Noramae  
Munster**

Nourishment Champion  
Culinary Creator



[Link to Video Recording of the Net Zero 2021 Conference - Technical Presentation 10-21-21](#)

# NET ZERO 2021

SEPTEMBER 13-16 | VIRTUAL + LOS ANGELES

Conference Presentation Title:

## **HeartFoods Community Farms A Food Waste to Food Operation**

The HeartFoods Community Farms addresses all four parts of the world's food system that must be transformed, that is:

**Production, Processing, Distribution and Consumption**



September 13, 2021

Presentation by:

**Mark Buehrer, Director  
2020 ENGINEERING**

**HEARTFOODS<sup>®</sup>**



## Can you vouch for John Doe?

John has applied to raise funding for Company Name on Wefunder and provided your name as a personal reference.

| *Quote goes here*

Wefunder has raised hundreds of millions for startups that later went on to raise over \$5 billion in follow-on funding from venture capitalists.

Can you vouch for John?

VOUCH FOR JOHN

LEARN MORE

### About Wefunder

We help anyone invest as little as \$100 in the startups they believe in. We're also a Public Benefit Corporation with a mission to keep the American dream alive. We aim to help 20,000 founders get off the ground by 2029.

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