Bay Area Catalysts for Technology Innovation
Panelists

Esther Morales
Assistant Vice Chancellor, University of California, San Francisco

Robert Lalanne
Vice Chancellor, University of California, Berkeley

Kelly Kline
Economic Development Director, City of Fremont

Moderator
Jay Sholl
Advisory & Transaction Services, CBRE
Innovation districts are based on the premise that collaboration and productivity result from proximity, and therefore job creation and innovation can be fostered through the intentional clustering of businesses, institutions, ideas and people.

- Over the last decade, cities have started to develop different types of clustering strategies, including dedicating certain areas as “Innovation Districts”.
- As of January 2015, it is estimated that there are approximately 80 of these Innovation Districts across the globe.
**Place Making Lab:** Experimentation is central to the ethos of the Innovation District. Creators want to use the space to experiment in clean energy, citizen participation, education, transportation, and social infrastructure.

**Catalyst Required:** Districts created by the commitment and vision of key figures in the community.

**Finance and Investment:** State or federal funding and/or programs, the degree to which they utilize them varies. Each district uses a variety of tax captures, seed funding, infrastructure development and grants.

**Entrepreneurs:** focused on individuals who are creating opportunities, products, and services.

**Universities:** a necessity for making the education, talent, entrepreneur connection.

**Infrastructure:** All should benefit from the shared infrastructure, access to public transit, internet connectivity, and multi-modal transportation; “high tech” including energy delivery, waste management, and lighting.

**Promote collaboration:** create a close-knit ecosystem, networking assets to build community and clustering to foster creative focused sustainable growth.

**Provide public & private space + programming:** establish an abundance of collaborative open spaces and organizations including incubators, accelerators, co-working spaces, schools and job training firms advancing specific skill sets for the innovation economy.

**Develop a 24-hour neighborhood:** build “innovation” housing, provide live-work spaces, focused creative affordable housing options, attract an innovative nightlife, build cultural institutions, support services to residents and workers in the district.

**Anchor Plus**
Anchor-driven in midtown/downtown areas like Cambridge and Philadelphia secured by institutions like MIT and Drexel University. *(Mission Bay?)*

**Urbanized Science Park**
Isolated areas of innovation, outside the city core, traditional R&D suburban campuses are experiencing densification like Research Triangle Park in Raleigh Durham. *(Fremont?)*

**Re-imagined Urban Area**
Industrial, waterfront, or warehouse districts undergoing physical and economic transformation powered by transit access and proximity to innovative, cutting-edge anchor institutions in urban areas like Brooklyn, and Seattle. *(Richmond?)*
Where Are They?

The location of innovation districts within a metropolis varies

**Anchor Plus Model**
The anchor plus model tends to be located in the downtowns and midtowns of central cities.

**Urbanized Science Park**
The urbanization science parks model tends to be located in suburban and even exurban areas.

**Re-Imagined Urban Area**
The reimagined urban areas model tends to be located in older industrial areas, often along waterfronts near downtowns.
Barcelona @22 Re-imagined Urban Area
Why Innovation District Matter?

Perhaps most importantly, these districts promote inclusive growth. At a time of rising economic inequality, their mix of public/private funding, focus on education, as well as their proximity to low- and moderate-income neighborhoods could mean a significant expansion of opportunity for those still struggling to adapt to the new economy.

- Ties job growth to disruptive economic forces that leverage distinct economic positions. (Think “Convergence Economy”)
- Empowers Entrepreneurs as key vehicle for economic growth (Think “Collaboration”)
- Increases better and more accessible jobs (Think “Shared Prosperity”)
- Reduces carbon emissions (Think “Sustainability”)
- Raises revenues and repairs local municipal balance sheets (Think “Economic Development 2.0”)
Esther Morales
Assistant Vice Chancellor, University of California, San Francisco
Mission Bay Technology and Urban Development

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Urban Land Institute Concurrent Session
October 7, 2015

ESTHER E. MORALES
Assistant Vice Chancellor, Real Estate Assets and Development
Context:

- History of Mission Bay: from aging warehouses in 1990s to “innovation district” today
- UCSF at Mission Bay
- Life Sciences and Technology at Mission Bay
History of Mission Bay
Mission Bay (Circa 1980)
The 1998 Catellus Land Use Plan
The 1998 Catellus Plan
Mission Bay 2015
Today, Mission Bay is a global center for life sciences and technology innovation. Why?

Collaboration

- UCSF/Catellus Development Corporation/City of San Francisco for original 43 acre campus
- Goals for healthcare, biotechnology, life sciences development at Mission Bay
- Public private partnerships with life sciences and technology sector
- Community of City, Neighbors, University, and Private Industry
UCSF at Mission Bay
Background University of California San Francisco

- UCSF is the only campus in UC’s ten campus system which is dedicated solely to graduate level health sciences
- Nearly 3,000 students, over 1,000 postdoctoral scholars, and 1,700 clinical residents
- 28,000 faculty and staff
- UCSF Medical Center recognized as a world leader in health care
- UCSF owns 198 acres and occupies 9.2 million square feet of space in multiple sites throughout San Francisco
- Our buildings are valued at $7.3 billion
- UCSF has a $3B annual operating budget, and produces a $6 billion annual impact in the Bay Area
- UCSF maintains long-standing affiliations with the Gladstone Institutes also at Mission Bay as well as with the Veterans Affairs Medical Center, and San Francisco General Hospital
UCSF at Mission Bay

- UCSF’s **original 43 acre north campus** was donated to the University in 1998 by Catellus Development Corporation and the City of San Francisco.

- In 2008, UCSF acquired an additional **14 acres south** of sixteenth street, the south campus, for UCSF’s medical center at mission bay.

- In 2014, we purchased another **3.8 acres just east** of Third Street across the street from the hospital site. This is the east campus. This site will be developed by 2019 for consolidation of programs throughout the City from leased spaces and for programs which will benefit by being adjacent to our current activities at mission bay.

- UCSF also leases another 300,000 feet space from Alexandria and China Basin in buildings adjacent to or near Mission Bay.
17C – HELEN DILLER CANCER RESEARCH BUILDING

17A/B – CARDIOVASCULAR RESEARCH BUILDING

19B – ROCK HALL

24A/B/C – GENENTECH HALL
Future UCSF Projects by 2020
Life Sciences and Technology at Mission Bay
3-4 MILION SF OF STATE-OF-THE-ART OFFICE AND RESEARCH SPACE

7,000+ RESIDENTIAL UNITS UNDER CONSTRUCTION OR COMPLETED SINCE 2010

SF GIANTS, WARRIORS, AND WORLD-CLASS ENTERTAINMENT

49 ACRES OF PARKS AND OPEN SPACES

NEW SUBWAY T-LINE UNDER CONSTRUCTION

NEW MARIPOSA EXIT TO BE COMPLETED IN 2016

NEW 4TH STREET RETAIL, 250K SF UNDERWAY
SIZE
700,000 SF OFFICE
15,000 SF RETAIL

SCHEDULE
CURRENTLY UNDER CONSTRUCTION
DEC 2016  TI'S BEGIN
MID 2017  MOVE-IN

DESIGN
DESIGNED BY: RIOS CLEMENTI HALE
EXECUTED BY: FLAD ARCHITECTS
Uber Mission Bay – Third Street
Long term growth demands by 2035, UCSF will:

- increase childcare spaces from 300 to 430
- increase housing from 650 to 1650
- increase its total square footage from 9M to 11.5M
- see similar growth in overall population and clinic visits
- UCSF expects continued growth in research funding, in clinical volume, and in philanthropy; all significant drivers for capital construction
- We will see new efforts to engage in industry partnerships at unprecedented levels, including new research enterprises through the development of incubator spaces at and near Mission Bay, new research affiliations with private technology companies in areas of big data and precision medicine, and through public private project delivery models for development of new facilities
MISSION BAY: A CONTEMPORARY DISTRICT

Connected to dynamic neighborhoods rich in craft and culture (Potrero Hill & Dogpatch), Mission Bay has been revived once again as a vibrant and influential hub of industry enhanced by deep innovative spirit.
Kelly Kline
Economic Development Director,
City of Fremont
Fremont’s Story: Threat vs. Opportunity

- Closure of 5 M square foot NUMMI Factory 😞
- Tesla Purchases NUMMI for Model S Production 😊
- Union Pacific RR purchases 160 acres surrounding the factory for a railroad storage yard. 😞
- UP agrees to sell as adjacent BART station nears completion. 😊
Warm Springs Area in Context
Catalytic Opportunity in Warm Springs

BART Arrives in early 2016

Innovation Way – BART to Fremont Boulevard
Warm Springs Existing Condition
Future Vision — Parcel North of Tesla
Warm Springs Land Use Plan

Catalytic Opportunity:
• 20,000 jobs
• 4,000 housing units
• New BART station end of 2015

Key feature:
Performance based planning based on minimum requirements

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Lessons Learned So Far…

*Labeling something “innovative” does not make it so…*

Minimum threshold of innovation-oriented firms, start-ups institutions, or clusters needed to create an ecosystem.

*Empirically based evidence is needed to:*
– understand competitive stance
– encourage collaboration across institutions, firms, and entrepreneurs
– create “place” to increase vitality, facilitate innovation, and spur growth
More Lessons

Importance of Place
To facilitate open innovation, extend hours, and create a culturally and educationally enriched environment

Importance of Intermediaries (accelerators & incubators)
Evolution from the traditional “research and development” model to a “search and development” -- solving innovation questions by collaborating with other firms

Importance of Inclusive Growth and Equitable Outcomes
Many established and emerging innovation districts are located in proximity to distressed communities. This proximity creates enormous opportunity for employment opportunities, tax revenues for services, and talent links to schools.
Integrating Manufacturing Into Innovation Zones

Will the new industrial city work?
At MIT symposium, promise of advanced manufacturing suggests new ways to reshape urban space.
Creating an Innovation Ecosystem

WORTHY projects

SISTER CITY
- Berlin
- Asia
- Hipify the brand at SXSW!

STARTUP RECIPE
For any city
- 4 steps for exchange for your intern

WANT TO PARTNER WITH THE BAY AREA

INNOVATION TOURS
- Have passion & talent
- Want trusted ecosystem

ROADMAP
- From here to there with who

WANT SPACE
- Co/Living
- Co/Working

WHAT DO THE PEOPLE OF FREMONT WANT
- Power of temporary
- All ages

GOITIA GET SOME MORE WEIRD!
- Weird Springs
- Add fresh, relevant value to the diploma
- Internships
- Hands on learning

UNIVERSITY
- Curriculum
- Ed. Models
- Global Students

ON THE EDGE
- Concerge
- Coffee Shop
- Art
- FreeSpace
- At the BART station...
- All modes of learning

MULTIHOLIC

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Robert Lalanne
Vice Chancellor, University of California, Berkeley
Bay Area Catalysts for Technology Innovation & Urban Redevelopment

Bob Lalanne, Vice Chancellor Real Estate
Urban Land Institute Fall Meeting – San Francisco
October 2015
“Show me the money!”

- Local Government
- State Government
- Federal Government
- Philanthropists
- Private Investors
- Universities
- Medical Centers
Tension Between Land Value and Building Use

• Innovation Space
• Small-scale Manufacturing
• Applied Research
• Low Rise + High Ceilings = Low Density
• Low Density = Lower Building Values
• Parking
• Infrastructure
Where is the Talent Pool?

- Medical Center
- Universities
- Private Companies
Some Key Ingredients to development and starting a project

• Capital
  • Build Facilities, Annual Operations, Funding Researchers

• Talent Pool
  • Researchers, Students, Employees, Staff

• Intellectual Sponsorship
  • University, Medical Center, Corporate

• Research Park vs. Innovation
  • Closed Walls vs. Collaboration Between Industry and Academia
Berkeley Global Campus
A Bold Vision

• A site where the world’s most elite Universities and private companies work side by side in a Global Campus setting.

• A state-of-the-art, sustainable place for interdisciplinary, international and public/private collaborations working to develop solutions for 21st century challenges in energy, environment, health and the global economy.

• A living laboratory in which operating practices and infrastructure, facilities performance monitoring and sustainability goals are leveraged to engage, apply and strengthen research.
The Setting

• 134 bay-front acres
• Minutes from main campus
• Ferry access to San Francisco by 2017
Transportation Options
Existing Site

- Total acres: 134
- 81 existing structures
- 1.05 million GSF
- Population of 300
- Existing activities:
  - Research
  - Offices
  - Storage
Research, Education and Support Uses

- 109 acres
- Lab, classroom, office, admin. buildings
- Support infrastructure
- Community space
- Dining, visitor accommodation, retail
- Recreation
- Transportation infrastructure
- Open space (plazas, courtyards)
Illustrative Master Plan

- 5.4 million sq ft
- Distinct walkable neighborhoods
- Deflects wind; creates sheltered spaces
- East-west solar building orientation
- Diversity of open edges and public access points
- Multi-modal grid connected to surrounding streets
Leveraging Research Excellence to Address Global Challenges

Research Partners (LBNL, other universities etc.)

Focus areas include:
- Energy & Climate
- Data Science
- Health
- Smart Infrastructure
- Social & Global Inequality

Innovation and Entrepreneurship

Corporate Partners & Private Philanthropy

Berkeley Global Campus at Richmond Bay could provide new space and help forge new public-private partnerships

Government Partners
Selected Highlights: Energy & Climate

- **Kavli Energy NanoScience Institute**
  latest advances in nanoscience to capture and channel energy at the molecular or nanoscale for human use

- **Global Change Biology**
  how organisms and ecological systems respond and adapt to global environmental change

- **Joint Bioenergy Institute (JBEI)**
  synthetic biology to transform biomass sugars into energy-rich fuels

- **Energy Biosciences Institute (EBI)**
  largest public-private partnership of its kind $500M investment from BP for bioenergy development
Selected Highlights: Data Science

Nearly every field of discovery is transitioning from “data poor” to “data rich.”

- **Berkeley Institute for Data Science**
  enabling scientific breakthroughs through interdisciplinary, data-driven discovery

- **Simons Institute for the Theory of Computing**
  providing the underpinnings for modern computer science and data approaches

- **D-Lab**
  supporting data intensive social science

- **Algorithms, Machines & People (AMP Lab)**
  creating new analytics tools

- **Center for Long-Term Cybersecurity**
  assessing the future of cybersecurity
Selected Highlights: Health

• **Precision Medicine**
  developing targeted treatments to enable breakthrough diagnostic tools and therapies

• **Innovative Genomics Initiative (IGI)**
  revolutionary DNA editing technology for new therapies for disease

• **Neuroscience**
  understanding the human brain to develop new approaches to address neurological disorders and trauma

• **Global Health**
  bringing health care solutions to communities around the world
Selected Highlights: Smart Infrastructure

• **Institute for Transportation Studies**
  leading state-of-the-art transportation planning, infrastructure management, logistics and traffic operations

• **City and Regional Planning**
  planning sustainable cities and regions around the world

• **Laboratory for Manufacturing and Sustainability (LMAS)**
  creating technologies and tools to innovate manufacturing products, processes and systems (e.g. precision and green manufacturing)
Selected Highlights: Social and Global Inequality

- **Blum Center for Developing Economies**
  understanding and acting on global poverty and inequality

- **Center for the Effective Global Action**
  conducting rigorous evaluations of development programs, policies, and technologies around the world

- **Center for Equitable Growth**
  achieving economic growth that is fairly distributed

- **Haas Institute for a Fair and Inclusive Society**
  eliminating barriers to an inclusive, just, and sustainable society
UC Berkeley's Entrepreneurship Ecosystem
Are we in a bubble? (Abundant Capital)

- “There isn’t a company out there that can not raise capital on Wall Street today”
- Housing – Apartments & Single-family prices
- Stock Market
- Will Innovation/”Start-ups” Funding and Risk Investment Slow Down If There Is A Correction?
- Plan Accordingly!
Historical Trend Data

Source: PwC/NVCA MoneyTree™ Report, Data: Thomson Reuters
Thank You
According to Enrico Moretti, author of “The New Geography of Jobs”, innovative individuals in the U.S. tend to multiply work for so many non-innovators seeking to serve their myriad needs; think service jobs like lawyers, plumbers, masseuses, stockbrokers, etc. What are you specifically doing to attract tech workers/innovation companies to your project?

Anchor institutions including innovative companies, advanced education facilities and research institutions have moved their facilities as a means of generating greater innovation output and reducing costs. How concerned are you about the continuing rising costs of living and housing in the Bay Area?
Gracias. Thank You. 謝謝. Obrigado. شكرا