

Innovation



Entrepreneurship



CleanTech in San Jose, Capital of Silicon Valley

Clusters and Publically Funded Labs- Sharing Best Practices



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Silicon Valley History & Achievements



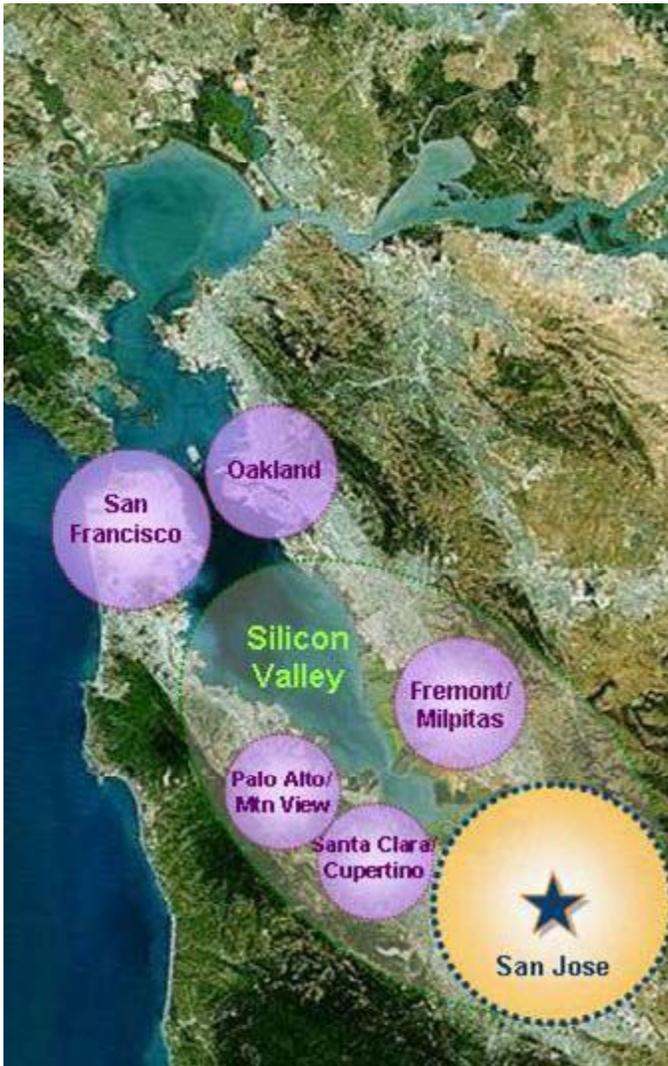
Take Advantage of Silicon Valley's Unique Environment for Innovation

- **History of Entrepreneurship**
- **# 1 U.S. city for number of patents per million residents: 810 per million residents (WKCI 2008)**
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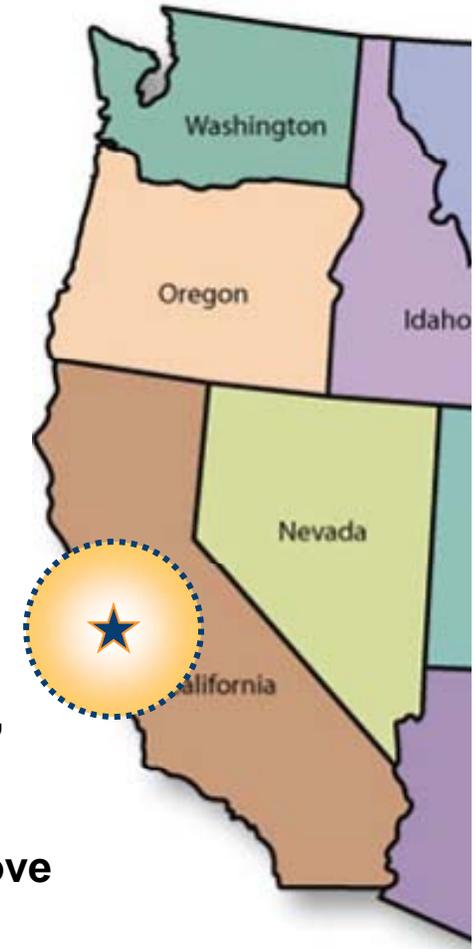
Access Specialized Human Resources, Cost Effectively

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- **#2 city in the world for Labor Productivity (WKCI 2008)—top city in U.S.**
- **Sophisticated engineering, technical, manufacturing workforce—San Jose has 250,000+ technology jobs**
- **More than 40% of San Jose residents were born outside of the United States; 40% have college degrees (compared with 25% U.S. average)**

San Jose At A Glance



- 10th largest city in U.S.
- The City Center of Silicon Valley
- Largest City in Bay Area
- Population: City 1 million, Metro area 1.8 million
- Employment: City 370,000, Metro area 890,000
- Key Sectors: IT/Electronics, Life Sciences, Clean Tech, Nano-Tech, Bio-Informatics
- Per Capita GDP: \$60,000, 35% above nation (Moody's Economy.com 2007)



California Has Led U.S. in Protecting the Environment



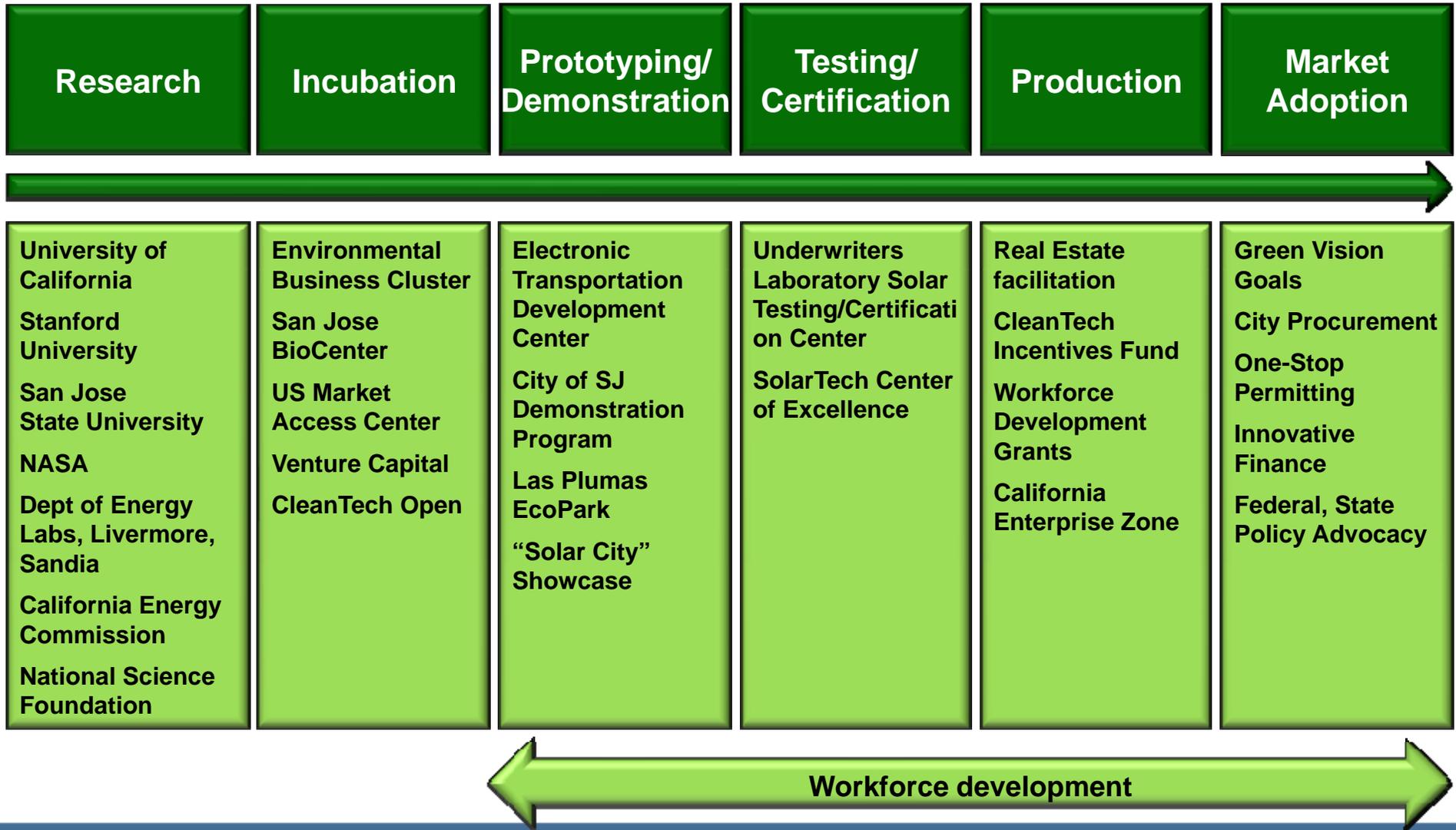
- ❑ **Most aggressive consumer incentives to adopt energy efficient appliances; utility decoupling.**
- ❑ **CA is 1 of 5 most energy efficient economics in the world (France, Germany, UK, Japan); Energy consumption per capita has remained flat for 3 decades, while increasing 50% in rest of the nation.**
- ❑ **CA most aggressive renewable portfolio standard in the nation (33% by 2020; national Energy Bill 20%) CA now at 22% renewables, nation at 3%.**
- ❑ **CA most aggressive greenhouse gas emissions reduction target (AB32 reduce to 1990 levels by 2020)**
- ❑ **CA stringent vehicle emission, mileage standards may now be adopted by nation (by 2016 vehicles emit 30% less carbon dioxide/other green house gases than they did in 2000; hit fuel economy target of 35.6 mpg)**

San Jose's Green Vision



- ❑ **Acting on a bold vision of 10 green goals in 15 years including:**
 - ❑ **Job growth from CleanTech advancements**
 - ❑ **Drastically reducing San Jose's carbon footprint**
 - ❑ **Breaking dependence on non-renewable energy sources**
 - ❑ **A green mobility system**
 - ❑ **50 million square feet of green buildings**
- ❑ **One of America's top recycling cities: more than 60% waste is recycled**

San Jose's Integrated Model for CleanTech



Incubation in San Jose



- ❑ **Environmental Business Cluster**
- ❑ **San Jose BioCenter**
- ❑ **Software Business Cluster**
- ❑ **US Market Access Center**
- ❑ **Irish Innovation Center**
- ❑ **iPark (Korean Software Incubator)**
- ❑ **Las Plumas CleanTech Demonstration Center**



Environmental Business Cluster



- ❑ **Commercialize the best technologies that address the global climate crisis**
- ❑ **1st largest Cleantech incubator in the U.S.**
 - **More than 160 companies assisted since 1994**
- ❑ **The premiere commercialization partner**
 - **San Jose State University Research Foundation**
 - **National Research Energy Labs**
 - **California Energy Commission**
 - **The Cleantech Open (CTO)**

The EBC is the largest private commercialization incubator for clean technology in the United States

Environmental Business Cluster Services



Coaching

- **Commercialization Coaching**
- **On-site Service Providers**
- **Mentors**

Networks

- **Financial**
- **Policy Makers/Regulatory Agencies**
- **Government**

Education

- **Funding (Stimulus/Grant, Angel, Venture, Project)**
- **Business**
- **Science & Technology**

Infrastructure

- **Furnished Offices & Common Areas**
- **“Corporate” deals**
- **Business & Ops team**
- **Community of entrepreneurs**

Environmental Business Cluster Programs



Financing Series

- **Angel and Venture Investing**
- **The Road to \$30M**
- **Creative Financing**
- **Project Financing**
- **Government Financing**

Meet with...Series

- **Agencies/Research Institutes**
 - *DOE, EPA, CEC, CPUC, NASA, SRI*
- **Venture**
 - *Physic Ventures, Khosla, Vantage Point, MDV, RockPort, Applied Ventures, DBL Investors*
- **Corporations**
 - *PG&E, Google, Bosch, Chevron*

Core Values for Operations



San Jose BioCenter Overview



Vision

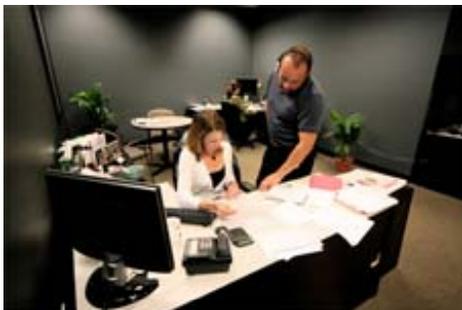
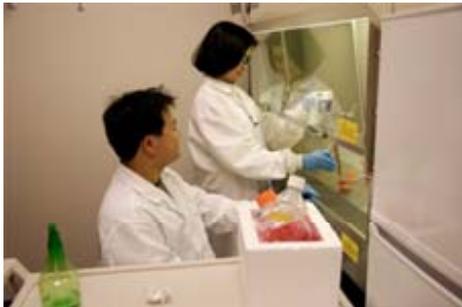
- **The leader in accelerating new life enhancing technologies to the public; to build economic wealth and to create societal impact**

Mission

- **To be the premier commercialization “destination location”**
 - **the most comprehensive, flexible, turn-key operation to start an emerging science & technology company**

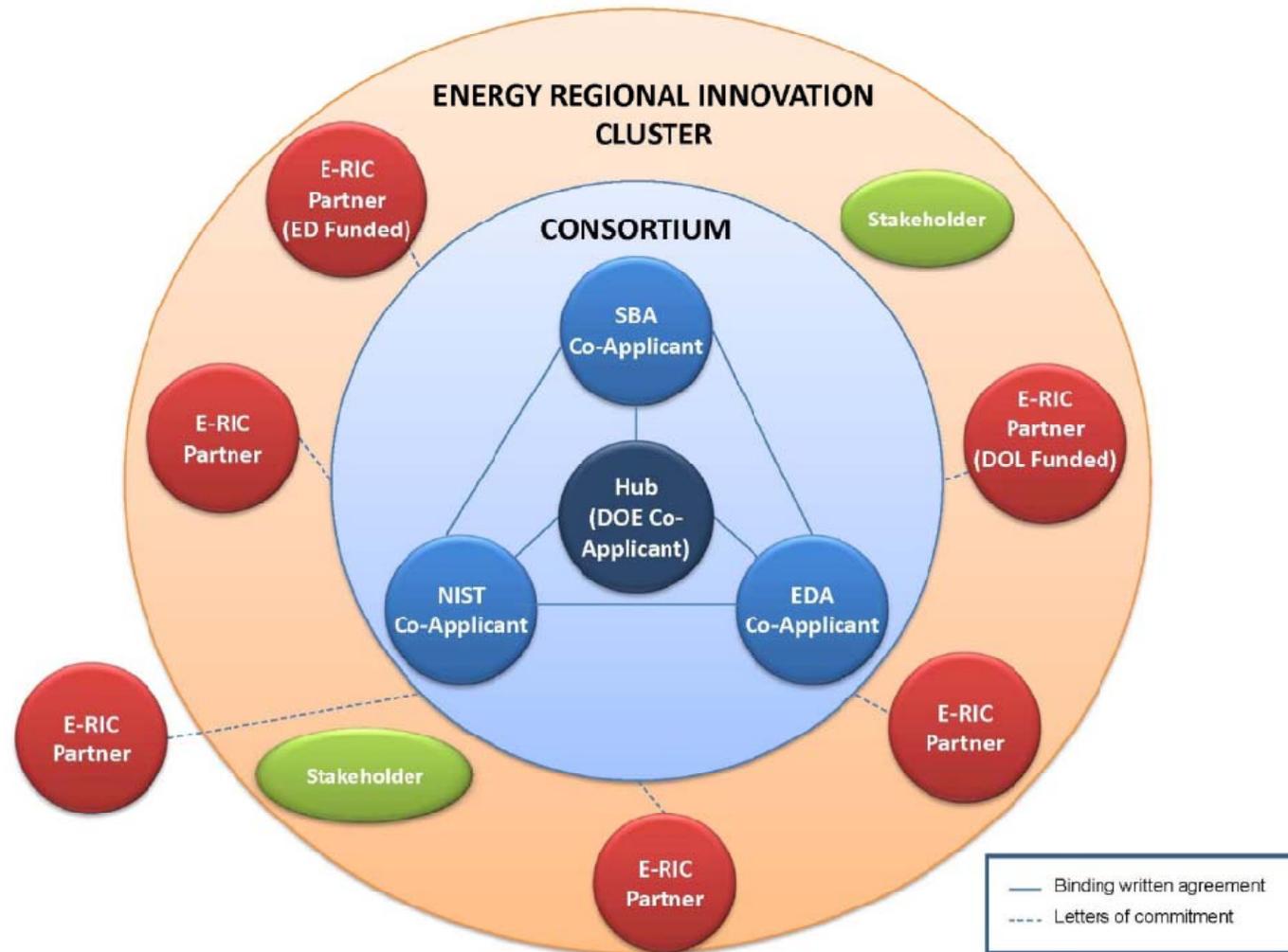


San Jose BioCenter Lab & Operations Support



- **Business Licenses**
- **HMBP/EPA/etc registration**
- **HM Management**
- **EH&S audits**
- **Safety Training**
 - **Hazardous Materials Handling/Safety/Communications**
 - **Annual Emergency Evacuation Training**
 - **Tissue Culture**
 - **Autoclave**
- **\$1.2 billion in capital raised**
- **Permitting and management of regulatory processes for central equipment/processes**

Upcoming Strategic Efforts



Opportunities for Collaboration

1. CleanTech

Renewable Energy

- Solar (PV, CIGS, CSP, CPV)
- Fuel Cell
- Storage/distribution

Green Building/Energy efficiency

- Control & monitoring systems
- LED lighting
- Materials

Clean Transportation

- Alternative fuels & vehicles
- Public transit
- Smart infrastructure

2. Participating in San Jose Incubators

3. Demonstration Projects

WPCP



Innovation



Entrepreneurship



CleanTech in San Jose, Capital of Silicon Valley

San Jose's Shift to Sustainability and Incentives



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Silicon Valley History & Achievements



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Clean Technology Will Be Silicon Valley's Next Wave of Innovation



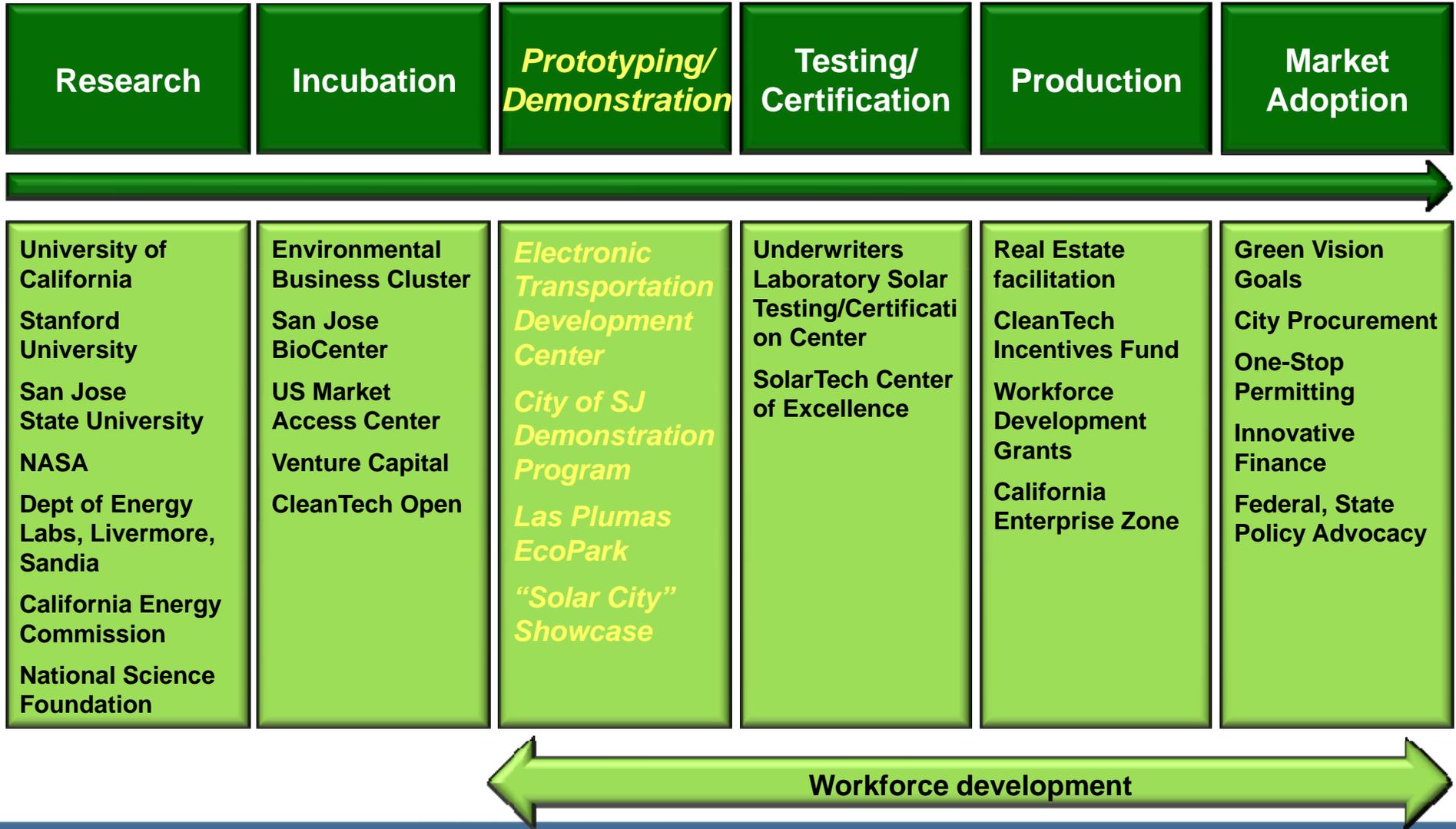
- **We aim to have as much innovation in our CleanTech sector as we had in our IT sector; this is natural evolution from these prior waves of innovation and unique contributions we can make**
- **“Climate Prosperity”**: protecting our environment need not come at expense of economic growth (can spur!); need rapid breakthroughs and accelerate alliances especially with existing infrastructure
- **Key areas of focus: solar energy, energy monitoring systems, smart grid; alt fuels, efficient lighting, building materials (\$1.8 billion in VC last year)**
- **Market Transformation through legislation: AB 811 tax financing for solar and energy efficiency improvements**

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San Jose's Integrated Model for CleanTech



Industry Support from Government



City Support Services:

- Driving the Market
- Site Selection Assistance
- Expedited Permitting Assistance: Special Tenant Improvement Program, Industrial Tool Installation Program
- Introduction to venture capitalists, lawyers, CPA's, executive search firms, etc.
- Identify potential business partners, subcontractors

City Financial Incentives:

- **Workforce Assistance:** Access grant funds for training cleantech employees through California State and Federal Recovery and Reinvestment Act
- **Enterprise Zone:** Special incentives to reduce business-operating costs in heart of Silicon Valley (hiring tax credit, sales and use tax credit, business expense deduction, income tax credit for employees)
- **CleanTech Jobs Investment Fund:** financial support to assist with capital equipment acquisition (\$50,000-\$500,000)
- **Net New Development Incentives**