The National Academies of
SCIENCES · ENGINEERING · MEDICINE

FEDERAL FACILITIES COUNCIL

Panel 1: Developing Innovation Ecosystems and Partnerships

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NASA Research Park Briefing

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Executive Summary

- NASA Research Park (NRP) is located on property at NASA Ames Research Center in California's Silicon Valley
  - In 1994 NASA took over ownership of the 1300-acre property of the former Naval Air Station Moffett Field adjacent to the original 500-acre NASA campus
  - NASA has developed the property into the NASA Research Park to create a world-class, shared-use R&D campus for government, academia, non-profits and industry
  - Partnership with Mountain View and Sunnyvale (local cities) from the beginning

- The NRP brings academia, industry and NASA together into a collaborative and profitable partnership to advance the NASA mission
  - Approximately 60 onsite partners
  - Developed culture of collaboration
  - Proven business management and processes
  - Environmental entitlement completed approximately 5 million sf new construction
  - Large-scale leases--Google (42 acres 1.2M sf)
  - Overall emphasis on R&D and STEM education
  - Five startups companies in NRP now employing thousands in new jobs

- Internal and external reviews indicate that the NRP will have direct programmatic and financial benefits for NASA and the nation
  - 2003 U.S. Government "Best Innovative Policy" national award
  - National Research Council Review, "new model of industry-government partnerships."
  - National Academy of Sciences "NRP a NASA and National Asset" Paper Presentation 2008
  - National Research Council "Understanding Research, Science and Technology Parks: Global Best Practices" 2009

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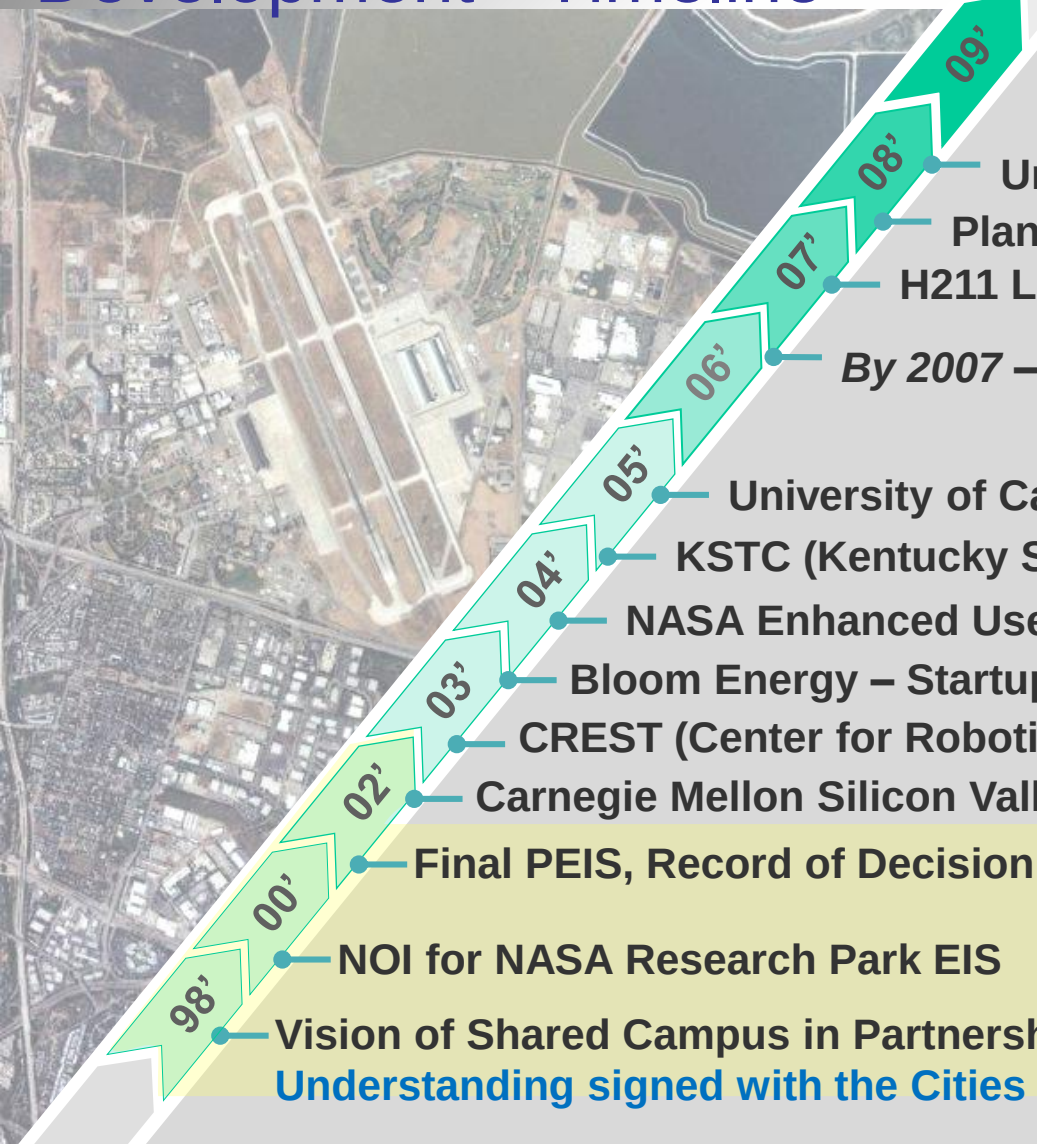
NASA Research Park

Development - Timeline



98' — Vision of Shared Campus in Partnership with the Community (Memorandum of Understanding signed with the Cities of Mountain View and Sunnyvale)

00' — NOI for NASA Research Park EIS

02' — Final PEIS, Record of Decision NASA Ames Development Plan

03' — Carnegie Mellon Silicon Valley – Historic Building 23 Re-Use

04' — CREST (Center for Robotic Exploration and Space Technologies)

05' — Bloom Energy – Startup in Building 543

06' — NASA Enhanced Use Leasing (EUL) Program

07' — KSTC (Kentucky Science and Technology Corporation)

08' — University of California Silicon Valley Center

09' — *By 2007* – More than 40 Industry & University Partners

H211 Lease / R&D Airfield Use Agreement

Planetary Ventures (Google) EUL – 42 Acres

University Associates EUL – 77 Acres

17' … — *Present* –60 Industry & University Partnerships with NASA

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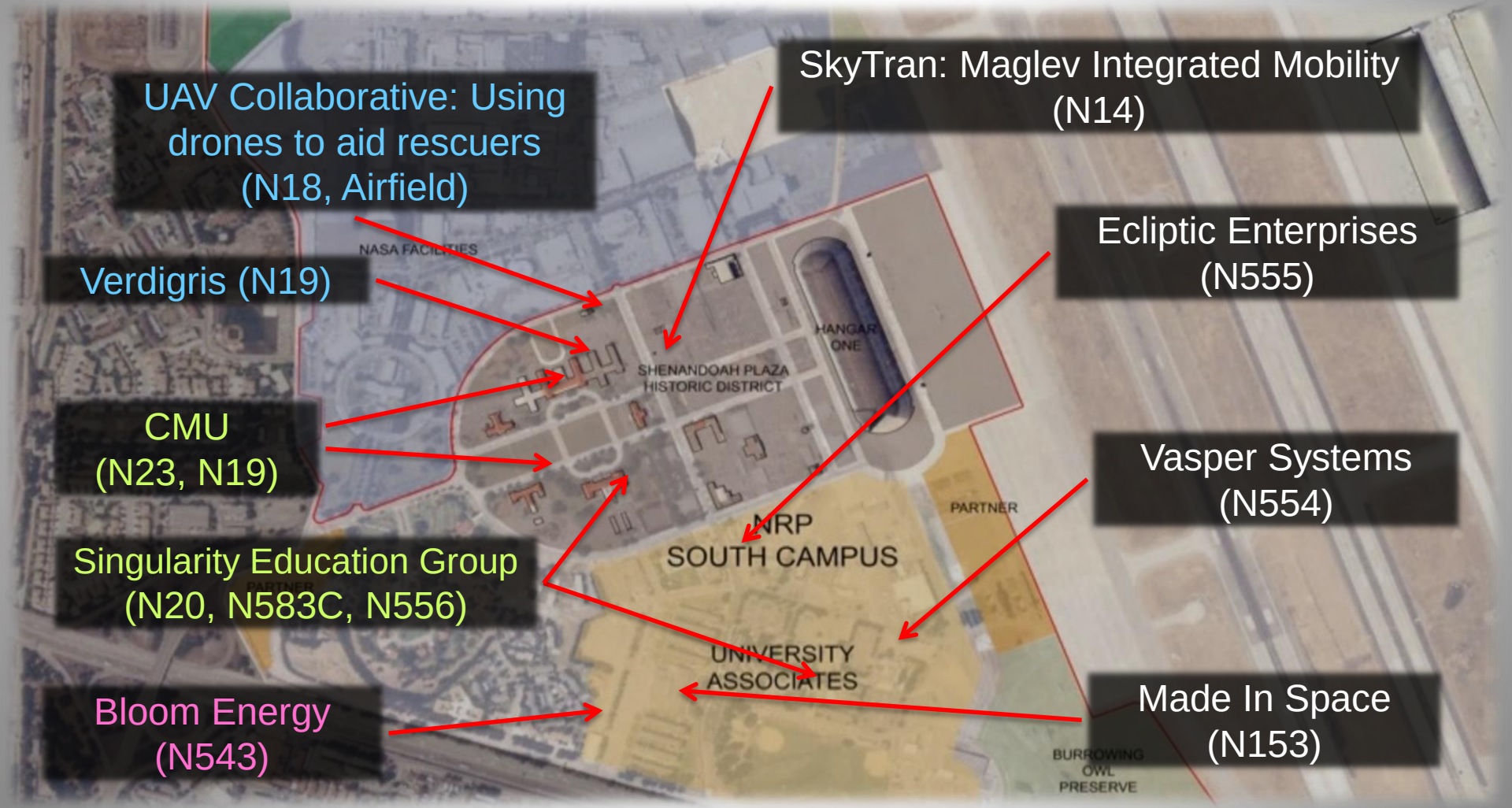
NASA Research Park



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NASA Research Park

Google

Mission Statement: “To organize the world's information and make it universally accessible and useful.”

Location: Ground lease in the Bay View district of NASA Ames Research Center for 1.2 MSF of development on 42 acres of land.

NASA Relevance: The original Google/NASA MOU envisioned these areas of research collaborations:

- Large-scale data management
- Massively distributed computing
- Bio-Info-Nano convergence
- R&D activities to encourage the entrepreneurial space industry

- Innovative and Programmatic R&D partnerships.
- Ground lease rent: $3,675,500 per year;
- Off-site improvements: Total value of improvements $49,000,000.

NRP Startups Now in Full-scale Business

Nanostellar (www.nanostellar.com/), started in the NRP in one office in 2005, left in 2007 to begin manufacturing. Nanoscience for Environmental Applications, develops nano-material catalysts for a broad range of markets.

Benetech (www.benetech.org), (www.benetech.org) started as Arkenstone in the NRP in 1999. Changed name and moved to Palo Alto in 2001. Goal to create new technology solutions that serve humanity and empower people to improve their lives.

Tibion (http://www.alterg.com), life science bionics started in Historic Building 19. They have won numerous awards, developed the Tibion Bionic Leg, and have not moved to Sunnyvale to set up an expansive manufacturing space.

Apprion Inc. (www.apprion.com), was estabilished in 2004 utilizing space in building 19. In 2009 they had expanded so much they had to move to Mountain View win a 25,000 sf building. Apprion delivers wireless application networks for the manufacturing industry.

Bloom Energy (www.bloomenergy.com), founded in 2002 in NRP with a small technical team. They have grown internationally employing a diverse and talented team of researchers, engineers, and business people.

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Tibion
BIONIC TECHNOLOGIES

Apprion

Bloomenergy®

benetech
TECHNOLOGY SERVING HUMANITY

Summary

- Establishes a new world-class R&D and education campus for the nation
- Leverages NASA resources for greater mission benefit
- Enhances scientific research, technology advancement and transfer of research knowledge
- Pursues NASA's education and outreach goals
- Provides workforce development for high-tech careers
- Increases public involvement and understanding of science technology and exploration