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# Product Development and Customer Development through Government R&D Funding

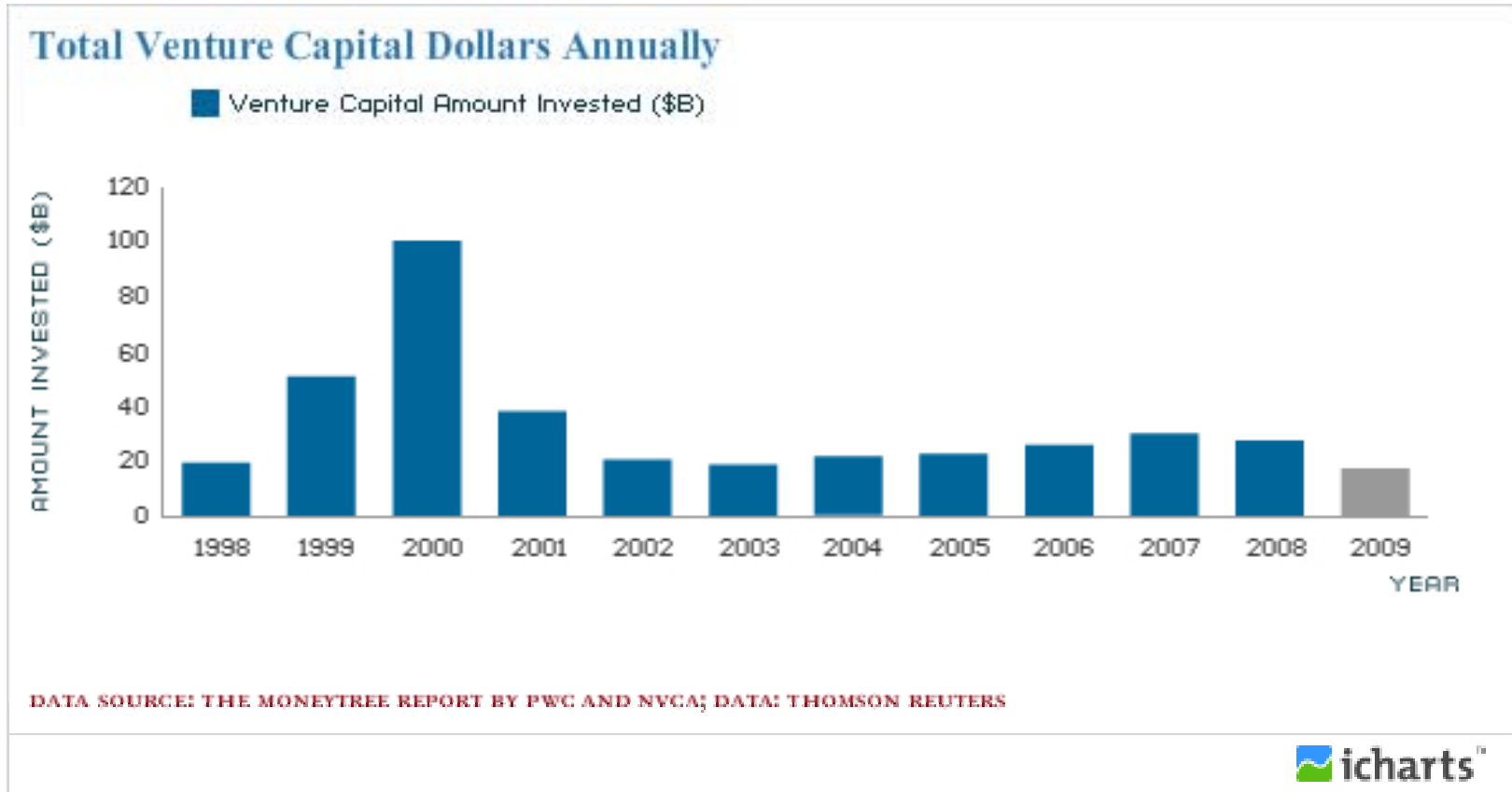
Peter S. Fiske  
November 29, 2012

# There's this customer...

- 17 million employees
- Spent \$2.6 trillion on goods and services in 2006
- Invests around \$100B annually in developing new technology
- The largest wholly-owned subsidiary of this company spends more than the entire economy of France

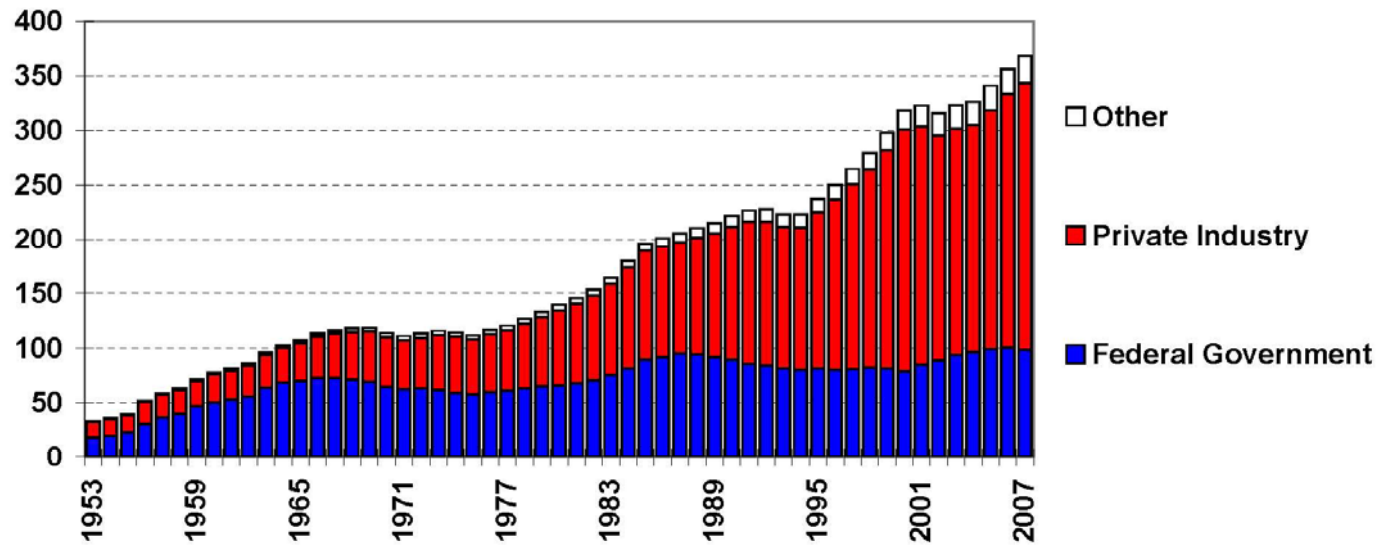
# Meet the world's most important Venture Capitalist:





## U.S. R&D Funding by Source, 1953-2007

expenditures in billions of constant 2007 dollars



Source: NSF, Division of Science Resources Statistics. (Data for 2007 are preliminary.)  
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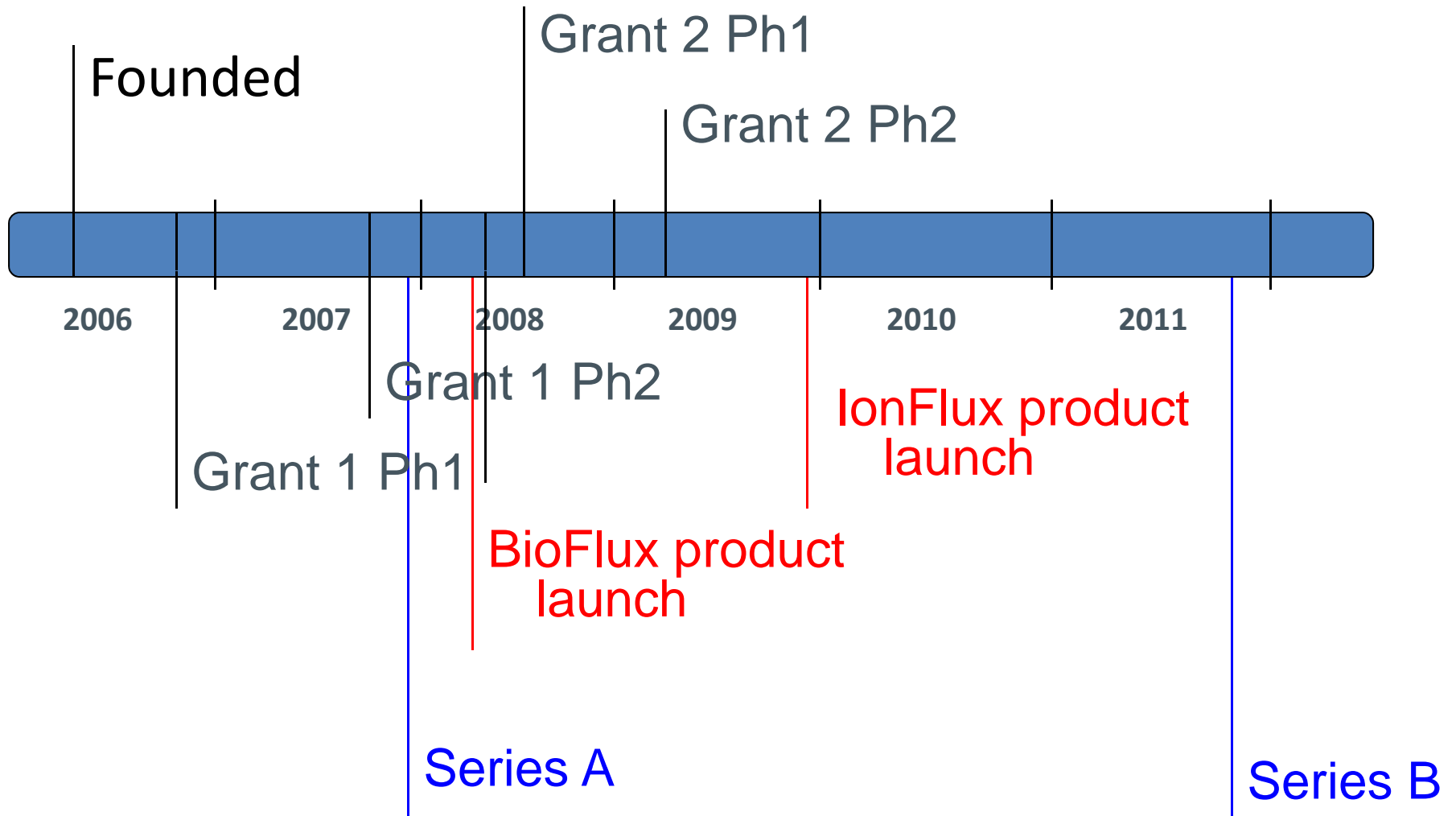
“People forget this: Silicon Valley was actually built on federal funding. People have this notion that SV was built in garages. And it’s true, we have some high-profile cases, Jobs – basement, Google in dorm, these things are true – the real fact is that Silicon Valley is the story of federal funding. HP – National Semiconductor, Sherman Fairchild.... People forget that Lockheed was our largest employer. It was these activities that led to the commercial spin-offs – We need to jump “back to the future””

Russell Hancock, Chief Executive, Joint Venture: Silicon Valley Network  
KQED Forum: State of the Silicon Valley Economy, 2/17/10

# PAX's track record

- 2008 – ATP grant (\$1.9M)
- 2009 – ARPA-E grant (\$3.0M)
- 2010 – CEC-ETDG grants (3 @ \$350K)
- 2010 – DOE-SBIR Phase 1 grant (\$150K)
- 2010 – DOE-NETL FOA-115 (\$2M)

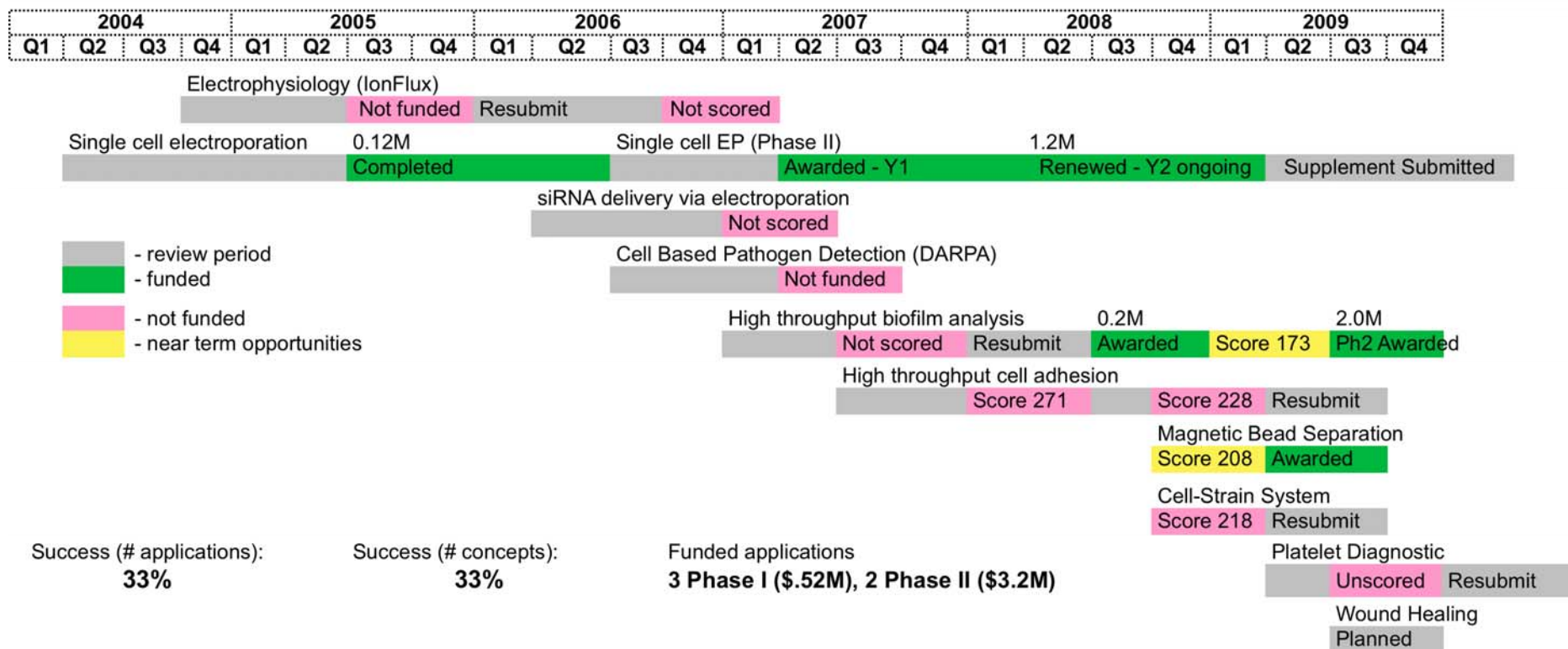
# High Level Timeline





# Grant pipeline and success rates

Fluxion Biosciences - Grant Financing Pipeline



# Why pursue government funding?

- \$ (obviously)
  - Fund new areas or side projects
- Development of the government customer
  - Uncle Sam is largest consumer of goods and services on the planet
- Market/technology/regulatory intelligence
- Get \$ that might otherwise go to the competition

**If all you're looking for is \$, look elsewhere...**

## Funding strategies – Part 1: things one can do w/out any help

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- Do nothing
- Apply for open competitions when you find them (SBIRs etc.)
- Develop relationship with gov't R&D sponsors - business development
- Join an existing public/private R&D consortium

**Try to steer existing \$s toward your company**

## Funding strategies Part 2: What lobbyists/professionals can help to do

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- Introduce you to key program managers
- Create/lead an industry/gov't R&D partnership
- Develop Congressional support for R&D funding
- Develop State/local support for economic development (e.g. NY)
- Improve odds of funding for open competition (yes, all \$ is political)

**Try to create new \$s directed toward your company**

# Some realities

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- All gov't \$ is political
- People tend to feed themselves first before sharing with friends
  - Know where you are in the line
- You must align your work (or, at least, your messaging) with the programmatic goals of the agency
- Jobs, jobs, jobs (and, more jobs...)

# In summary...

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- Gov't funding can be valuable component of support for a start-up BUT
  - Management must have a long-term strategy
    - Alignment of R&D and business goals is CRITICAL
    - CEO and CTO need to do the aligning
  - Hard to do w/out at least a bit of help
    - Would you develop your legal strategy w/o a lawyer?
- Gov't funding and Equity investment are not competitive BUT
  - Perfect synergy is hard to achieve
    - Both sides need to have some flexibility
  - Timescale for funding is completely different
  - The value of the \$ is often overestimated while the value of the market development is often underestimated