

From



to



ATHENA SEMI
Athena Semiconductors, Inc.

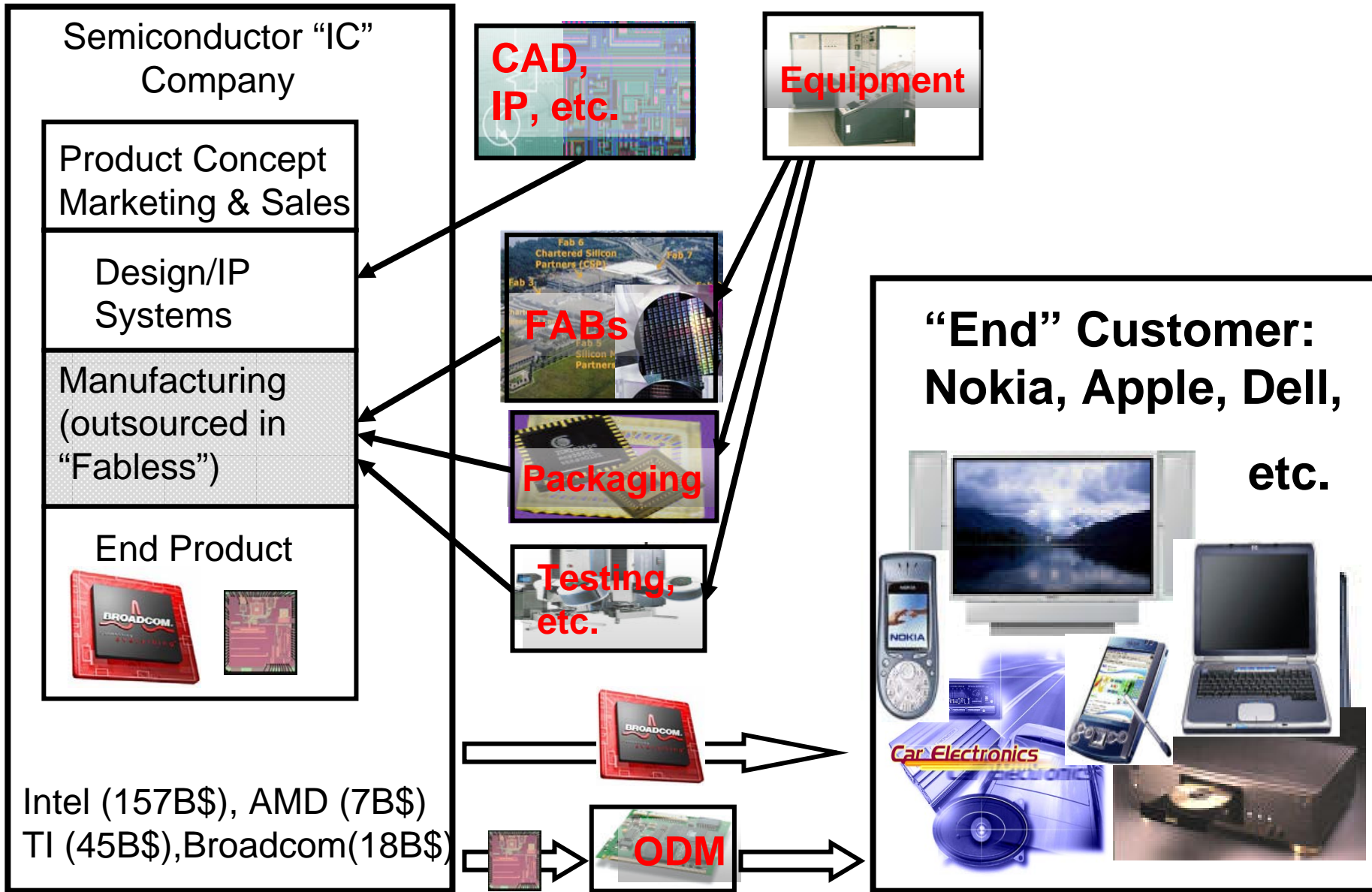
to



Experiences from a Successful “Fabless Semiconductor” Startup in Silicon Valley and Greece

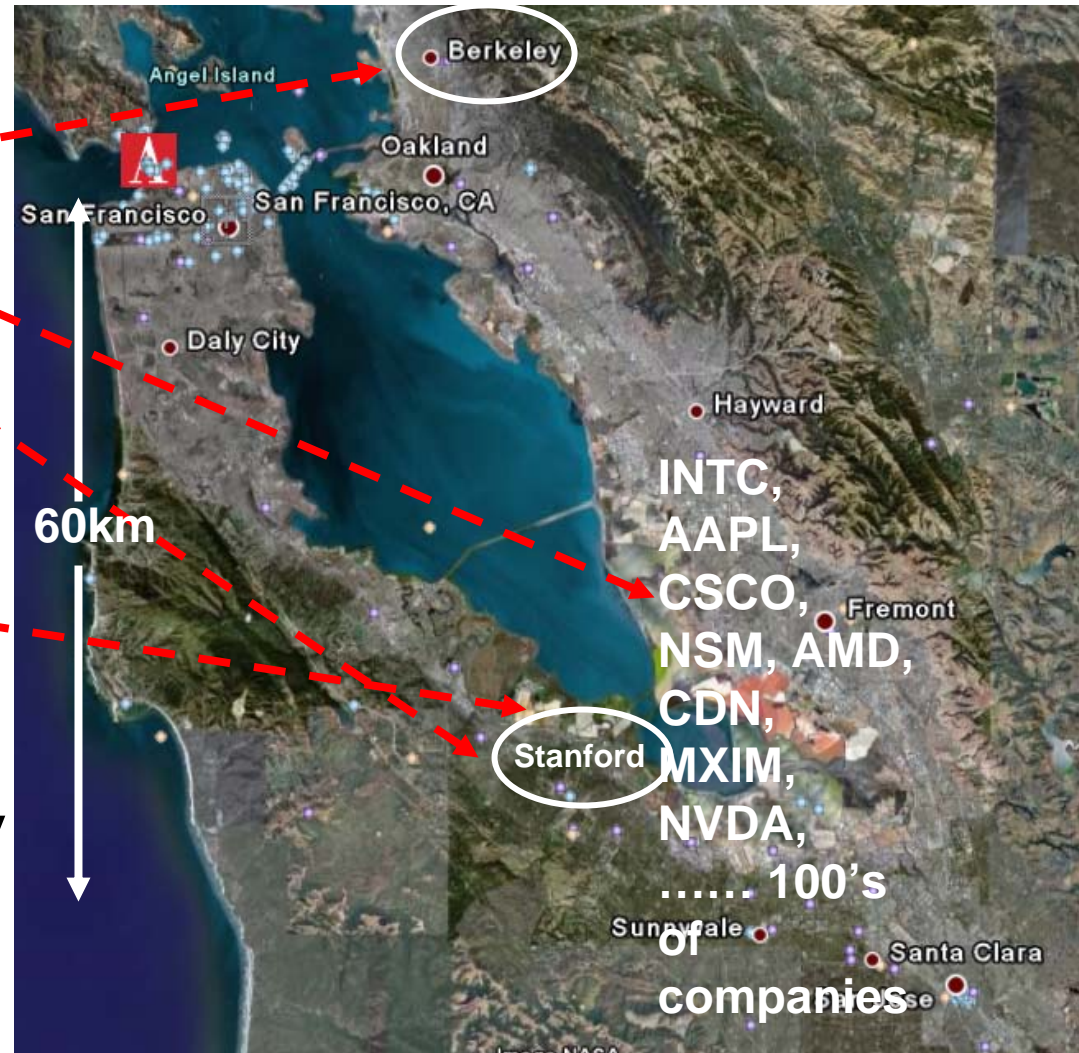
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Sr. Principal Project Manager
Broadcom, Hellas

What is the Semiconductor Business

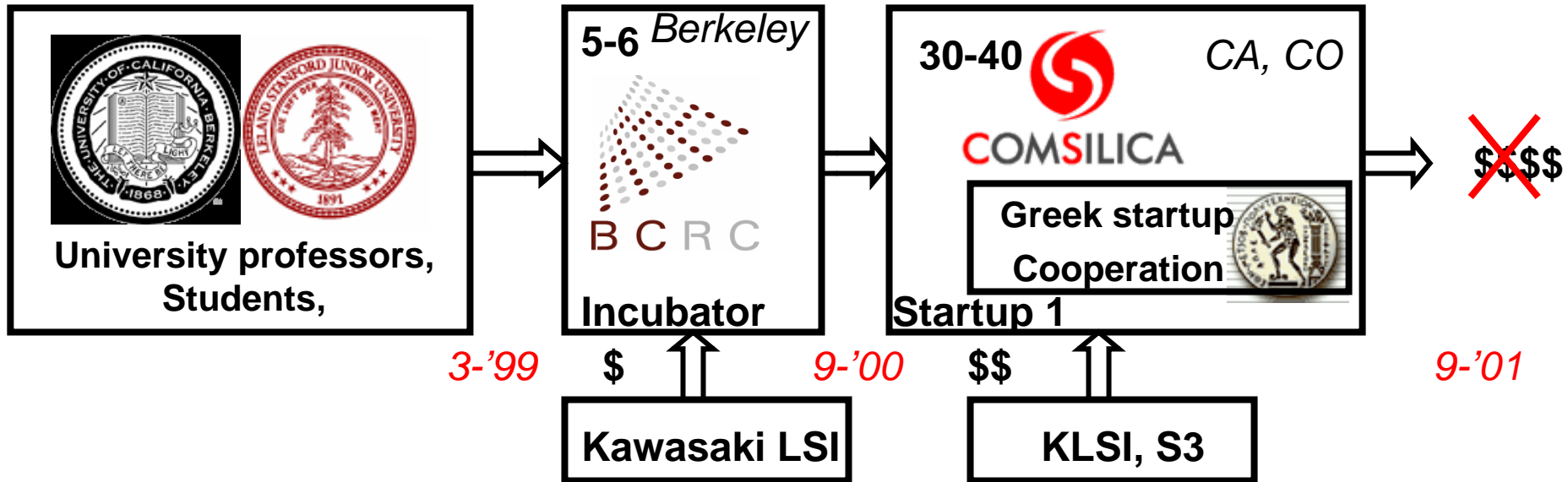


Semiconductor Startups In Silicon Valley, CA, USA

- Source of ideas – talent:
 - Industry
 - Universities
 - Attracts talent from everywhere
- \$\$\$
 - Entrepreneurs
 - VCs
 - Banks
- Huge pool of resources, services for the semiconductor “food-chain”
- Legislation and culture help “entrepreneurship”

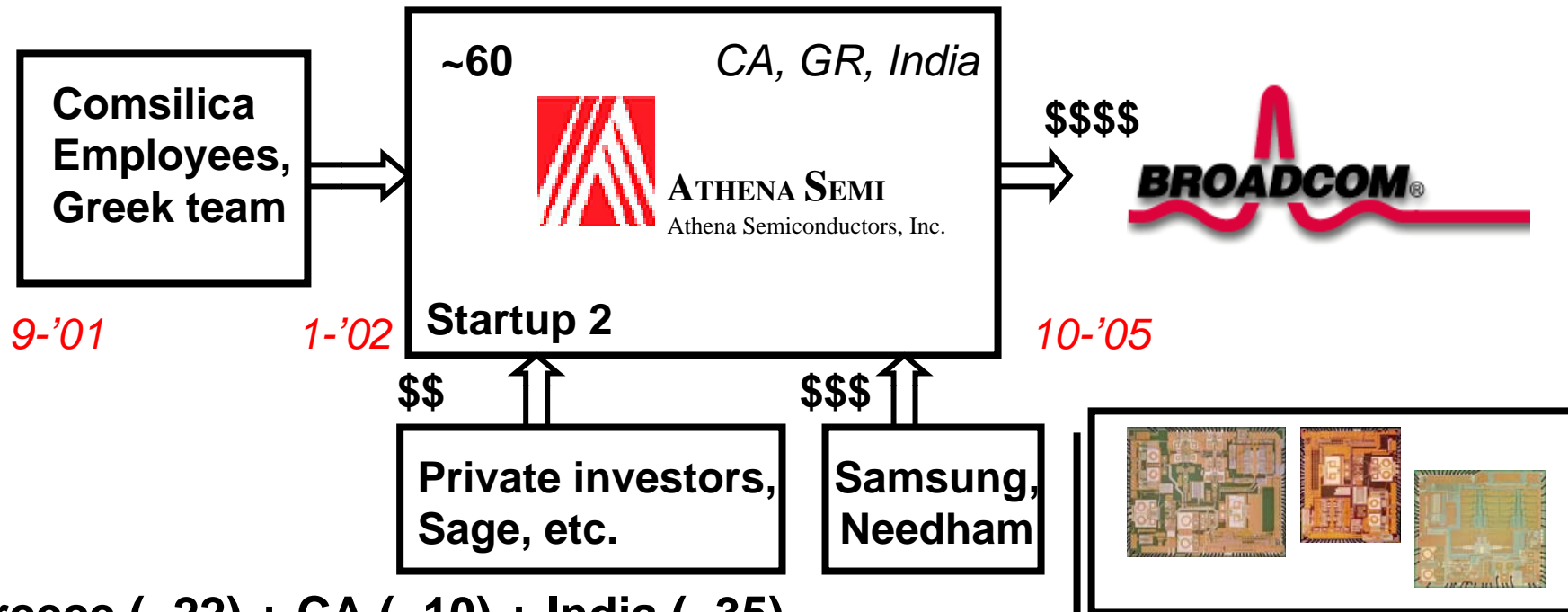


From BCRC to Comsilica



- Target Product: WiFi (802.11a/b/g) Chipset
- Competitive Advantages:
 - 2nd in new market, CMOS+special technologies, Single-chip
 - “sponsored” by all-star TAB (= Technical Advisory Board)
- Exit strategy: IPO or acquisition
- Produced: Initial designs and test-chips
- 2nd round funding collapsed due to 9/11

From Comsilica to Broadcom



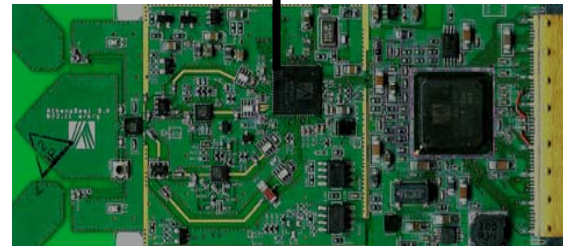
- Greece (~22) + CA (~10) + India (~35)

- Produced:

- fully working WiFi (802.11a/g) chipset
- GSM , DVB-TH test-chips

- Technical Value recognized world-wide

- Other WiFi: one IPO, few acquired, many closed



802.11a/g ref. design

-24Mbps throughput meas.

> 50m range 54Mbps

Lesson from Fund-Seeking

- Talked to several (20-30) Leading Silicon Valley VC's and companies
- Ideally you don't want to use a VC (or use as late as possible)
 - VC's are a greedy bunch: equity dilution
 - Sometimes too much interference in daily operations early on
 - Some of the most successful public companies NEVER used VC funding
 - “Bootstrapping”: a good option if you can afford it ...
 - Work on “side” small projects to fund target business
 - Work on some prototype with own, or “angel funds”
- Where you get the money counts (Experienced investors contribute to success)
 - “Good” VCs:
 - have experience in your area,
 - Have several “plays” so they can risk and be patient
 - sometimes former executives/engineers of the industry
 - Will help in business plan, define targets,
 - Bring customers, business relations
 - Find additional funding
 - Will know what to expect: not push for revenues at the expense of R&D, know the time it takes
 - For IC business: look for “lead” in the US – silicon Valley area
 - This is the “heart” of IC industry ...

Lessons from Fund-Seeking II

- What (good) VCs are looking for:
 - “Super-star” people who excel in their areas and love what they do
 - “Killer” instinct, dedication, hard work
 - Competitive advantage
 - 1st mover in new market
 - Dramatic improvement over existing solution (incremental is not enough) for mature markets
 - New idea, few years ahead of others
 - Clearly defined market strategy: how to make \$\$
- For IC product business:
 - Very expensive to build:
 - 40,000,000\$ to 50,000,000\$ needed BEFORE profit/IPO
 - ATHR used more than 80,000,000\$ VC/Investment bank funding BEFORE IPO
 - NOT so easy in Europe (Greece even harder)
 - NEED Corporate US presence

Lessons From Being at a Startup

- You get what you pay for
 - Hire the best possible regardless of cost
 - Do not be cheap in R&D
- It is not only “all star PH.D. engineering”
 - Need experienced management
 - Marketing is very important
- Why startups survive and have a future (despite INTC, TXN, etc ...)
 - Small is flexible and dedicated
 - Large companies have bureaucracy
 - Large public companies are sometimes too-much driven by pressure to deliver a “good quarter” to invest medium to long-term R&D
 - People need motivation: high equity at startups, “ownership” of the product
- It is OK to change business plan and target on the way
 - Be flexible: Company “X” started as “technical consulting” and ended up a measurement instrument company competing with Agilent
- Be honest and realistic about schedules
- Managing multiple locations is tough
- Focus!
- Sometimes you need to forget your weekends and vacation
- Greece is a very “tough” place to build a company