



SINGULARITY UNIVERSITY

Preparing Humanity For Accelerating Technological Change

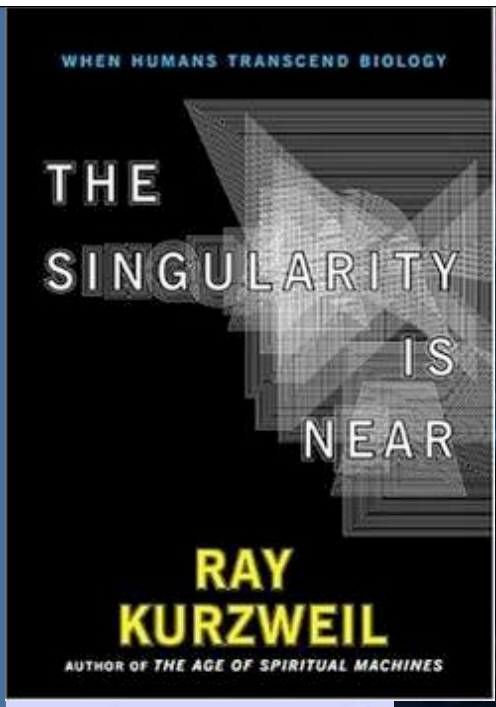
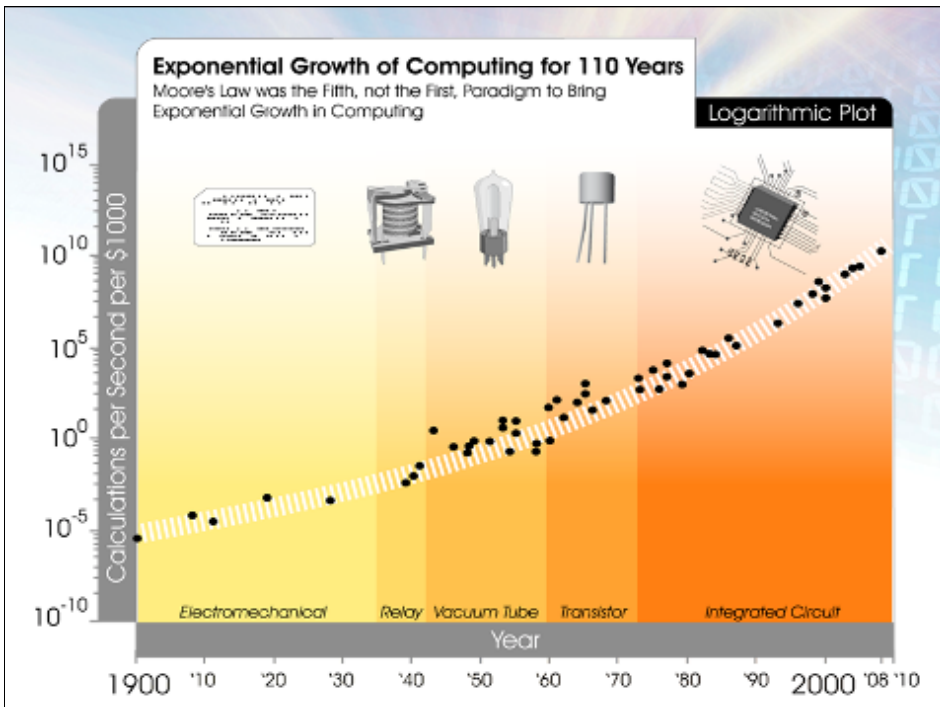


Foresight 2010



ePlanet Ventures





Mission



SINGULARITY UNIVERSITY
Preparing Humanity For Accelerating Technological Change

Singularity University is an **interdisciplinary** university whose mission is to assemble, educate and inspire a cadre of leaders who strive to understand and facilitate the development of **exponentially advancing technologies** (biotech, nanotech, AI, etc.) to address humanity's grand challenges



Singularity University – Moffett Field, CA



1. **Assemble** the best & brightest grad-students (multi-disciplinary)
2. **Teach** cutting-edge research and projected developments
3. Focus on **humanity's greatest challenges & opportunities**
4. Build/maintain a **global network** of the alumni & faculty of SU
5. **Promote** the creation of new businesses & research directions based on these exponentially growing technologies
6. **Communicate** the opportunities and benefits, as well



- 1. Graduate Studies Program**, for top graduate and postgraduate students (9-weeks each Summer)
Limited to 120; \$25,000, started July–Aug 2009

- 2. 9-Day Executive Program**, for Executives & Government leaders
Limited to 40; \$15,000,



International Space University – Overview:

- Founded in 1987 on the campus of MIT
- Operates a 9-week Summer Studies Program (SSP)
- Has operated 21 SSP Programs around the world
- Supported by top Space Agencies/Aerospace Comp.
- “3i’s” – International, Interdisciplinary & Intercultural

ISU’s Success:

- Over 4000 graduates
- ISU’s graduates are in leadership of NASA, Canadian, Chinese, Russian & European Space Agencies

ISU’s Role with Singularity University:

- SU has licensed the ISU structure and ISU’s



Sept '08 Founding Meeting



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SU Founding Meeting @ NASA Ames - Sept 2008; 50 leaders from the Bay Area

Larry Page – go big..



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Feb '08 Launch



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FT.com
FINANCIAL TIMES

Companies

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Google and Nasa back new school for futurists

By David Gelles in San Francisco

Published: February 3 2009 05:02 | Last updated: February 3 2009 05:02

Google and Nasa are throwing their weight behind a new school for futurists in Silicon Valley to prepare scientists for an era when machines become cleverer than people.

BusinessWeek

TECHNOLOGY February 3, 2009, 12:01AM EST

text size: T | T

Singularity U.: No Frats, Just Breakthroughs

Futurist Ray Kurzweil and X-Prize founder Peter Diamandis are setting up a new school aimed at exponential advancements

Home > News > Cutting Edge

cnet news

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February 2, 2009 9:00 PM PST

Leading futurists, thinkers to launch Silicon Valley university

by Daniel Terdiman

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World-Renowned Scientists Team With Google And NASA To Launch Singularity University

by Jason Kincaid on February 2, 2009

72 Comments

NASA, Google, and some of the foremost authorities in science and technology have teamed up to create a new school, dubbed **Singularity University**, that is looking to solve



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Unique university coming to Bay Area this year

A new university is sprouting up in the Bay Area this summer with quite an ambitious charter: solving the world's biggest problems.

IMAGES



Singularity University, which will be housed on the NASA Ames base near Mountain View and begin classes in June, is the brainchild of Ray Kurzweil and Peter Diamandis. The two world-renowned scientists were expected to unveil their plans at the TED (Technology, Entertainment, Design) conference beginning in Long Beach today.

The school hopes to attract students from a cross

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1. Future Studies & Forecasting
2. Policy, Law & Ethics
3. Finance & Entrepreneurship
4. Networks & Computing Systems
5. Biotechnology & Bioinformatics
6. Nanotechnology
7. Medicine, Neuroscience & Human Enhancement
8. AI & Robotics
9. Energy & Ecological Systems
10. Space & Physical Sciences



Track Chairs



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- **Dan Barry**, President, Denbar Robotics, former NASA astronaut
- **Neil Jacobstein** CEO, Teknowledge; Media X Prog, Stanford Univ
- **Daniel Kraft**, Cancer/Stem Cell Biology Institute, Stanford University
- **Tara Lemmey**, CEO of LENS Ventures; formerly President, EFF
- **Ralph Merkle**, Sr. Research Fellow, Institute for Molecular Manufacturing
- **Bob Metcalfe**, General Partner, Polaris Venture Partners
- **David S. Rose**, CEO Angelsoft, Managing Principal, Rose Tech



- **John Gage**, Kleiner Perkins, formerly Chief Scientist, SUN

Some Advisory Faculty..



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- **Sonia Arrison, Senior Fellow, Pacific Research Institute**
- **Tina Seeling, Director, Stanford Technology Ventures Program**
- **Vint Cerf, Vice President and Chief Internet Evangelist, Google Inc.**
- **Chris DiBona, Open Source Program Manager, Google Inc.**
- **Tim Ferriss, Author, The 4-Hour Workweek**
- **Larry Smarr, California Institute for Telecom & Information Technology**
- **George Smoot, Univ of California, Berkeley: 2006 Nobel Prize in Physics**



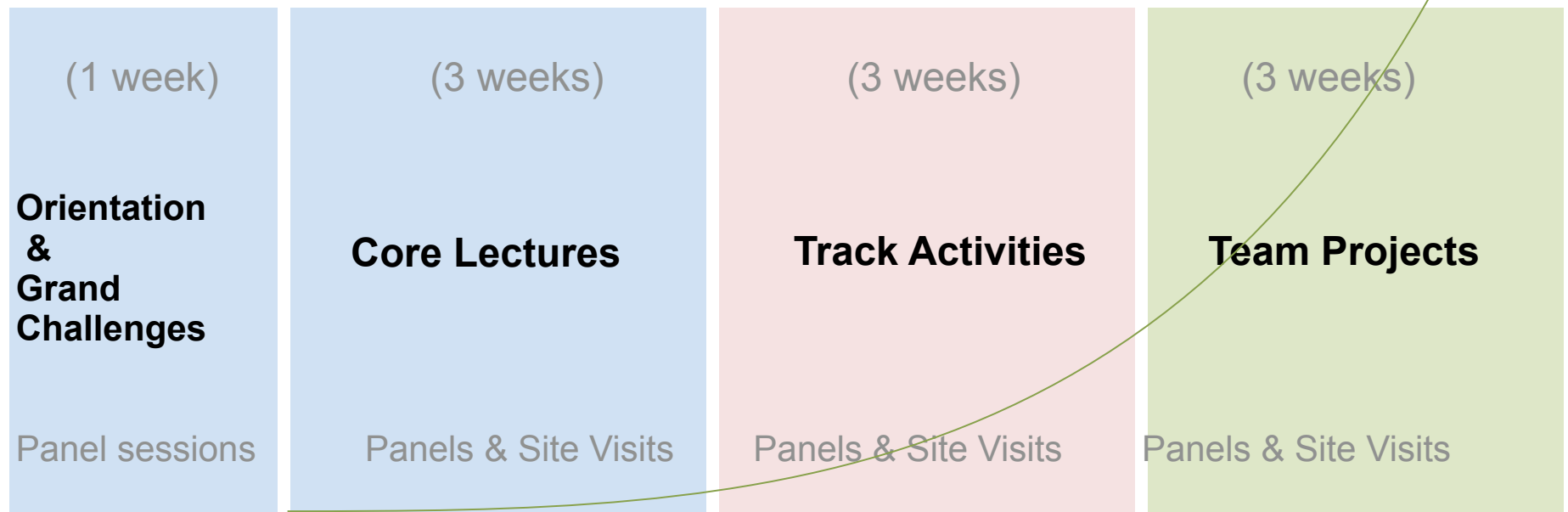
Graduate Studies Program



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Start: June 19, 2010

End: Aug 28, 2010




follows the ISU model

Convergence is Key



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 Singularity University		Future Studies & Forecasting	Finance & Entrepreneurship	Policy, Law & Ethics	Energy, Ecology & Space
Networks & Computing					
Biotech, Medicine & Neuroscience					
Nanotech					
AI & Robotics					

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“ 10^9+ Looking for large impact opportunities”

- 1. 2009’s Team Project: 10^9+ (ten to the ninth, plus)**
- 2. How can you positively impact 1 Billion people, worldwide, in 10–years time leveraging accelerating technologies.**
- 3. Students are given a challenging, interdisciplinary, and real world problem that exemplifies one of humanity’s grand challenges.**

SU Faculty



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Curriculum Planning Meeting (CPM2) @ NASA Ames - Mar 2009; 35 Faculty/Advisory



Sample of Schedule



GSP-09 Schedule July 2009

July 2009

		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Planner | Calendar | Event List

Day 3-Day Week 3-Week Month Year

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	1	2	3	4
10:00am Welcome Brunch	Week 1 Begins	7:30am Breakfast (Captain's)	7:30am Breakfast (Captain's)	7:30am Breakfast	7:30am Breakfast	Independence Day - No Lectures
11:00am SU Intro: Logistics	7:30am Breakfast	9:00am AIR CL1 - Overview	9:00am NT CL1 - Overview	9:00am MNHE CL1 - Medical	9:00am BB CL1 - Molecular	8:30am 4th Of July Celebration
12:30pm Introduction & Registration	8:00am Management Meeting	10:15am NCS CL1 - Networks	10:15am EES CL1 - Introduction	10:15am SPS CL1 - Adaptive	10:15am MNHE CL2 - Mechanical	2:30pm Rube Goldberg Team
5:00pm Late Registration	9:00am Conversation w/ Staff	11:30am FSF CL1 - Perspectives	11:30am FE CL1 - Singularity	11:30am PLE CL1 - Core 1	11:30am NT CL2 - Technical	
6:30pm Dinner and Student Meeting	10:15am GSP-09 Intro w/ Staff	12:45pm Lunch (Captain's)	12:45pm Lunch (Captain's)	1:00pm Lunch (off-site) - Singularity	12:45pm Lunch	
	11:30am Staff/TA Meeting	2:30pm Quad Time - Ropes Course	1:00pm Academic Meeting	2:30pm FE Workshop - The Future	1:00pm Staff/TF Meeting	
	12:45pm Lunch (SU Assoc. Meeting)	5:30pm Dinner	2:30pm Track and Group Meeting	6:00pm Dinner	2:15pm Group Selection Meeting	
	4:30pm Class Photo	6:30pm Singularity Presentation	4:30pm Special Lecture: Vision	7:00pm "Transcendent Mathematics"	2:30pm Team Project Overview	
	5:00pm Transport to Moffett Field		7:00pm Dinner & "Innovation"		6:00pm Dinner	
	6:00pm Opening Ceremony					
	8:00pm Travel to NASA					
	8:30pm Opening Reception					
5	6	7	8	9	10	11
Day Trip to SF	Week 2 Begins	7:30am Breakfast (NASA)	7:30am Breakfast	7:30am Breakfast (NASA)	7:30am Breakfast	7:30am Breakfast
10:00am Brunch	7:30am Breakfast	9:00am MNHE CL3- Stem	9:00am MNHE CL4- Neuro	9:00am AIR CL3- AI Applications	9:00am MNHE CL5- Neuro	9:00am BB CL4- Bioinformatics
	9:00am AIE CL2- AI Methods	10:15am BB CL2- Sequencing	10:15am EES CL2- Environmental	10:15am PLE CL2- The Science	10:15am BB CL3- Transcription	10:15am FSF CL2- Futures
	10:15am SPS CL2- Life In	11:30am NT CL3- Lithography	11:30am SPS CL3- Sensing	11:30am NT CL4- Self-Ass	11:30am SPS CL4- The P	11:30am FSF CL3- Forecast
	11:30am FE CL2- From Ide	12:45pm Lunch (Captain's)	12:45pm Lunch (NASA)	12:45pm Lunch (NASA)	12:45pm Lunch	12:45pm Lunch
	12:45pm Lunch	2:30pm Site Visit 1- IDEO	2:30pm Workshop Core 3- V	2:00pm AIR CL5- Approac	1:00pm Staff/TF Meeting	1:30pm Class Meeting- SU
	2:30pm Workshop: Core 2	6:00pm Dinner	6:00pm Team Project w/D	3:00pm Workshop Core 4 F	2:30pm Workshop Core 5 N	2:45pm 3-D Printing; sungl
	5:30pm Team Communication			6:00pm Dinner	6:00pm Dinner	
	6:00pm Dinner			6:00pm Academic Meeting	8:30pm ISU Cultural Night	
				7:00pm SU Panel 2- Team		



2009 Program: 1200 applications; 40 students selected

2010 Program: Expanding to 80 students, ~600 applns

- 1. Top in their field:** Students are selected in 1 of the 10 “tracks” and must be in the top of their class.
- 2. Demonstrated Entrepreneurs:** Students must have demonstrated entrepreneurial skills (founding companies, organizations or research projects).
- 3. Thinking about big challenges/opportunities:** Show a thirst and commitment to addressing big issues and opportunities.

GSP-09 Students



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Gender:

14 (35%) females
26 (65%) males

Age range:

average age: 31
yrs
min: 22 yrs
max: 47 yrs

Citizens of 13 nations:

- 17 USA
- 5 Canada
- 5 Israel
- 3 UK
- 2 Mexico
- 1 Brazil
- 1 Bolivia
- 1 India
- 1 N. Zealand
- 1 Poland
- 1 Portugal
- 1 Turkey
- 1 Russia



Team Project: One Global Voice



One Global Voice

Application Platform for SMS

- 75% of our 4 billion cell phones are still 2G
- What if they could access the same servers/information/cloud computing like we can
- “Facebook app platform for SMS”

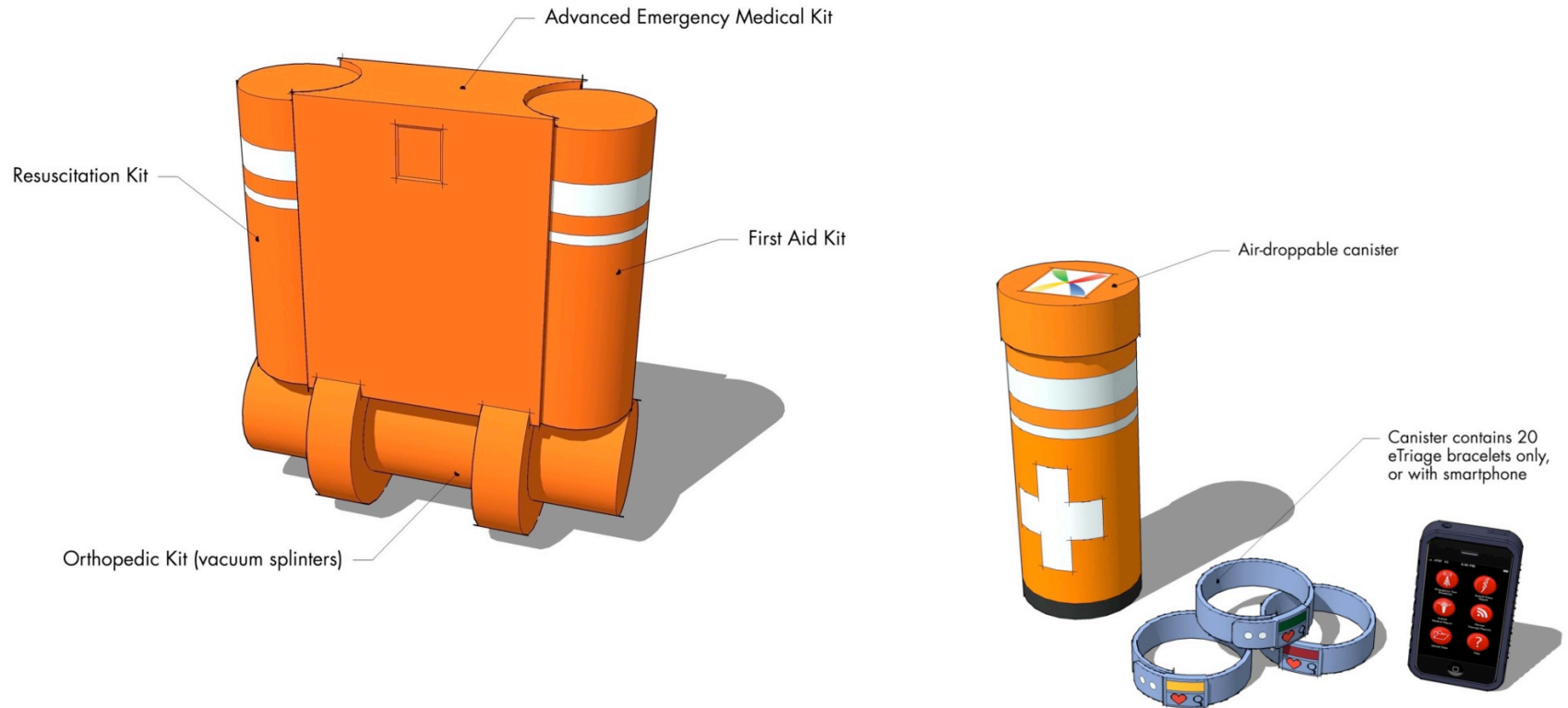


Team Project: Xidar

Civiguard - Technology



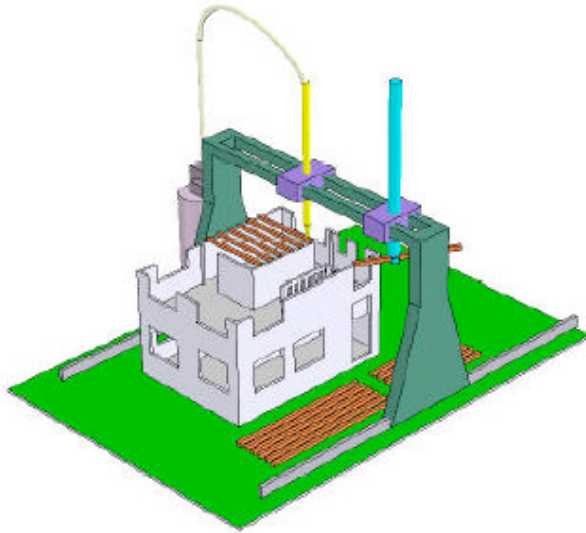
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Team Project: ACASA



- Behrokh Khoshnevis, an engineering professor at USC, has developed 15 patents for an automated “printing process” for buildings.
- His approach is already building 8’ walls
- It is projected to cost less than half of conventional masonry.
- Proof of concept exists, the next step is to commercialize it.



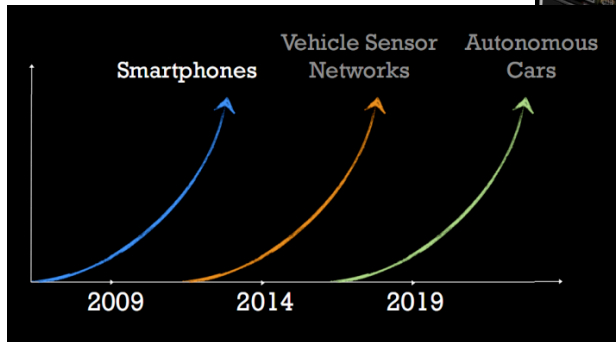
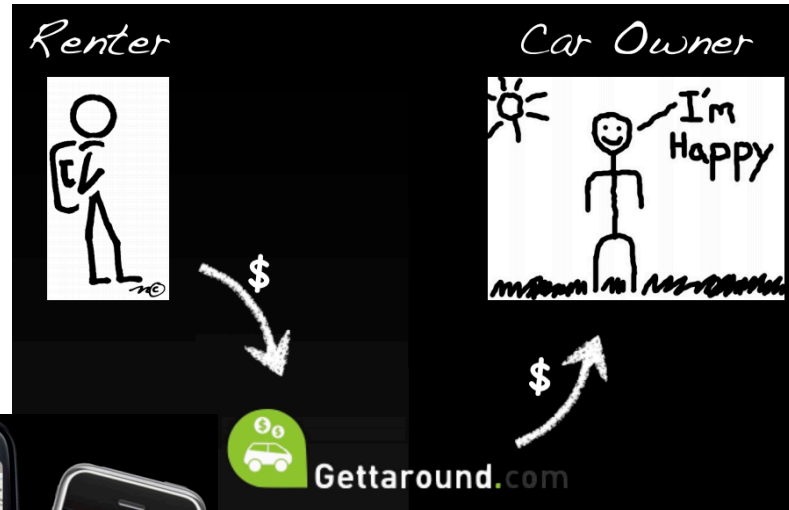


Team Project: Gettaround

Gettaround



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Associate Founders (\$100K)



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Limit to 12 total: (\$100K; 1-time donation)

1. Moses Znaimer, Founder, MZ Media
2. Keith Kleiner, Founder, The Haymar Hedge Fund (past Google)
3. Barney Pell, Founder, Powerset (acquired by Microsoft)
4. Klee Irwin, Founder, Irwin Naturals
5. Sonia Arrison, Senior Fellow, Pacific Research Institute
6. Dan Stoicescu, Founder, Sindan
7. Georges Harik, Distinguished Engineer, Google Inc.
8. Reese Jones, Founder of Netopia (Motorola)
9. David S. Rose, CEO Angelsoft, Managing Principal, Rose Tech Ventures
10. Sabiha Malik Foster, Founder, Ideas for Humanity
11. Peter L. Bloom, Managing Director, General Atlantic LLC
12. Geoffrey Shmigelsky, CEO, Appien Logic



Limit to 5 total: (\$250K; 1-time donation)

1. Google, Inc.
2. ePlanet Ventures
 - three additional corporate openings

Benefits include:

- 3 scholarships directed by Corp Founder
- 1 scholarship to a 3-day C-Level program /year
- 1 scholarship to the 10-day Management program/
year
- Invited to sit on the Board of Trustees
- Recognition in all materials
- Tax-deductible



Corporate Partners Program:

1. Limiting to 20 “Partners”

2. Fee: \$100,000

3. Benefits:

- Promote in all materials as “Corporate Partner”
- Incorporation of co’s technology into curriculum
- Join advertising campaign of Exec Program (\$20K spend)
- One seat in 9–day program (\$15K value)
- One Scholarship in co’s name for GSP’10 (\$25K value)
- 20% discount for 10 employees in 9–day (\$30K value)

Total value is \$90K out of the \$100K fee



1. Run Executive Programs
2. Support Team Projects and alumni
3. Find appropriate way to satisfy demand for SU
4. Three slots for Corporate Founders
5. Gear up for GSP10 (curriculum planning)
6. University Partnerships
 - 15 schools fund 2 students each
7. Create TP Fellowship fund to support projects



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Thank You!



Additional Information

Founding Meeting Sept '08



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Chris Anderson
Amara Angelica
Sonia Arrison
Celia Black
Laszlo Bock
Chris Boshuizen
Karen Bradford
Steve Brody
Jonathan Cain
James Canton
Tim Chang
Rho Christensen
Matt Cohler
Aubrey de Grey
Eric Di Benedetto
Peter Diamandis
Tim Draper
Alex Fielding

Susan Fonseca-Klein
Robert Freitas
David Friedberg
Jeff Huber
Salim Ismail
Neil Jacobstein
Donald James
Bruce Klein
Keith Kleiner
Harry Kloor
Ray Kurzweil
Jonas Lamis
Stephanie Langhoff
William Marshall
Gary Martin
Mitch Menaged
Ralph Merkle
Dharmendra Modha

Vince Monical
Tiffany V.C. Montague
Ramez Naam
Deep Nishar
Larry Page
Barney Pell
Michael Potter
Bob Richards
Philip Rosedale
Rick Sanford
Joshua Schachter
Michael Simpson
Larry Smarr
George Smoot
Patrick Soon-Shiong
Dan Whaley
Pete Worden
Moses Znaimer



3-Day: C-level Executives

- 20 total/session (high touch, Four -Seasons, NASA Ames)
- Intensive program; tailored to focus on ‘their industries’
- Start in 2010;
- About 350 “C-Level Execs” per year
- Provides an over-the-horizon radar view

9-Day: Expanded Exec Program

- 50 total/session
- Includes ‘site-technology visits’; hand-on demonstrations
- Start in November 2009; once a quarter