

## Business Innovation Project-Based Program

Fall 2022

### **Instructors:**

Solomon Darwin (Executive Director, Ctr for Growth Markets & Garwood Ctr for Corporate Innovation, Haas)  
Rhonda Shrader (Executive Director, Berkeley Haas Entrepreneurship Program, Haas)  
Benjamin Bradbury (Lecturer, Haas School of Business)  
Gauthier Vasseur (Executive Director, Fisher Center for Business Analytics, Haas)

### **Mentors:**

Arding Hsu (Ret. CEO & President of Siemens Technologies)  
Murali Krishna (Ret Director of JNTU)  
Anil Shah (Cardiologist, Business Entrepreneur and Chairman of the Smart Village Movement)  
Deepu Rathi (Sr. Director, Cisco)  
Bandyopadhyay Gautam (Innovation Director, Siemens)  
Uday Kapoor (Engineer, IIT Delhi; Documenter, Computer History Museum, Silicon Valley)  
Chris Bush (Executive Director Institute for Business Innovation, Haas)

### **Learning Objective:**

To create a business model solution to address pain-points of rural people in India using the Open Innovation framework, process of Design Thinking, the Lean Launchpad methodology, and basic no-code Data Analytics.

### **Final Deliverable:**

An evidence-based repeatable and scalable business model briefed in Business Model Canvas with details in PPT.

### **Project Description:**

Develop a business model solution for already-identified challenges in one of eight verticals: 1) Education, 2) Agriculture, 3) Healthcare (includes Water & Sanitation), 4) Information & Communication Technology, 5) Energy, 6) Entrepreneurship (Livelihood/Small Business), 7) Safety and Security, and 8) Transportation. Solutions are developed through researching and understanding on-ground realities and challenges in villages. Business models are then validated through interviewing stakeholders (companies, farmers, partners, government officials, etc.). Proposed business models should be scalable based on an ecosystem approach that benefits all stakeholders within the business ecosystem, and sustainable to all villages within a state.

Students will have access to and can pick challenges from the Smart Villages platform. Students can also submit a project proposal, but it will need to be reviewed and approved by a mentor and a SVM fellow. Completing a project is required to pass and receive a Program Certificate of Completion. Students are expected to work in groups and are encouraged to form their own support ecosystem of advisers and experts and draw information from various sources on their own.

Be an entrepreneur to pro-actively use available resources to achieve the goal. This is a self-driven course. If a student is not self-motivated and pro-active, she/he should not participate.

### **To benefit from the class, make sure to do the following:**

- Do all required pre-work/reading
- Follow weekly plan to practice the methodology thru your project
- Present to mentors and learn thru feedbacks. The mentors are corporate executives with tremendous knowledge and experience. They are volunteers. This is a lifetime opportunity!

## **Platforms:**

Students will be introduced to the following sources for project ideas:

- NASA's unused IP is available for researching potential commercial applications and business solutions.
- Smart Village Movement Platform - students can choose from challenges posted on the open innovation platform. Project categories fall into eight vertices: 1) Education, 2) Agriculture, 3) Healthcare (includes Water & Sanitation), 4) Information & Communication Technology, 5) Energy, 6) Entrepreneurship (Livelihood/Small Business), 7) Safety and Security, and 8) Transportation.
- Plug & Play start-up database - students can research applications from Bay Area startups and 280 corporate partners for potential commercial applications in rural India.
- Berkeley Skydeck - source for potential project ideas to research commercial applications in the context of a smart village from UC Berkeley active startups.

## **Four Resources for Students to Develop Innovative Solutions:**

1. **Smart Village Movement (SVM) Platform:** The SVM platform contains a library of challenges for students to select and undertake projects. The platform offers five Open Innovation resources for students: 1) Technology stack (list of emerging technology solutions that have been researched and put on the platform by the open innovation community; 2) Tools to develop business models for these emerging (half-baked and fully baked) technologies; 3) Collaborative forums to engage with other ecosystem stakeholders to develop their innovative ideas; 4) Repository of data and knowledge that is being continually updated to build better models; 5) Past projects, presentations, and surveys that will provide good examples from which students can learn and improve their business models without reinventing the wheel.

The SVM Platform engages all stakeholders in one place to accelerate solutions. This facilitates timely collaboration, data collection, and knowledge sharing, and eliminates the need for emails and telephone calls that take up time. All requests are made and submitted via the SVM platform to accumulate information, data, use cases, research, surveys, opportunities, failure cases, success cases, and available technologies for all to use across verticals. We will train and equip students to use this tool effectively to optimize the project outcomes.

2. **Books and SVM Manual:** Solomon Darwin published a manual called "Creating Smart Villages" based on actual on-the-ground experiences in India. The 2<sup>nd</sup> book, called "Smart Villages of Tomorrow – The Road to Mori," is another resource for students. This book describes the first smart village prototype developed in collaboration with Silicon Valley firms in the Mori Village. The book explores the successes and failures of various business models attempted during this experiment with the government of India in the state of Andhra Pradesh.

### **Other Resources:**

- Rebuilding India - Resetting the Jewel in the Crown
- Smart Villages: Harvard Case (A)
- Smart Villages: Harvard Case (B)
- White Paper on Smart Ecosystems – prepared for Mr. Bill Gates
- Smart Village Manual – by Solomon Darwin and his research team in India

3. **On-the-Ground Smart Village Team:** This team is Berkeley-trained in business models, open innovation, and lean start-up approaches to conduct pilots. This SVM team is another resource for students to access as they research and work on their projects. The SVM teams work directly with the Office of the Chief Minister in states where pilots are being performed. The team interfaces with government officials that include Principal Secretaries related to each of the eight verticals.
4. **Participating Corporate Executives:** Students can work with various firms that are piloting the business models on the ground to assist them in designing surveys and collecting relevant data for analysis and feedback. The full list of some sixty firms engaging in the pilot projects is attached.

## Required Pre-Work/Reading

1. Read the HBR article by Steve Blank.  
<https://hbr.org/2013/05/why-the-lean-start-up-changes-everything>
2. Watch the free Udacity course videos by Steve Blank. Attached is the link:  
<https://www.udacity.com/course/how-to-build-a-startup--ep245>. **The total time is about 5 hours.**
3. Petal diagram to identify competitors (including potential). Please read the article from Steve Blank.  
<https://steveblank.com/2013/11/08/a-new-way-to-look-at-competitors/> A lot of good materials there.
4. Value chart to do comparison. Please watch the following video.  
[https://www.youtube.com/watch?v=Upt\\_28d-WGg](https://www.youtube.com/watch?v=Upt_28d-WGg)
5. VRIO diagram to validate if the competitive advantages are sustainable. Please watch the following video.  
<https://www.youtube.com/watch?v=RMIbCpcpSt8>
6. Submit group's "What for Whom for What Statement" (**WHAT** are the **products/services** that create value for **WHOM** **customers** for **WHAT** **problem** ) and a short text on usage scenario of selected solution by the end of 1<sup>st</sup> lecture. Note that that these are hypotheses and will be validated and changed during the practice of Lean Startup methodology.

## Intro/Networking Session (September 1, 2022)

- This is a session that is attended by the authors of the challenges and students
  - o Students get to talk to the authors of the challenges and ask questions
  - o Students are given the opportunity to start signing-up for challenges during the virtual event and form groups of 5.
  - o Students will be assisted to sign-up on the SVM platform
  - o Students will pick a Grand Challenge (Drafted by SVM Fellows, SVM Participating Firm) or submit a project proposal, pending for review by a mentor and SVM fellow

## SEED Funding

Mentors and the SVM fellows will award \$2,000 SEED funding for the best business model proposal.

**Instruction Schedule - between 7am – 10am PDT (7:30-10:30 pm IST)**

**Instruction and Method of Working:**

Instruction will take place via Zoom as shown on the schedule below. The following weeks students will work on their business model proposal with their groups, mentors, and SVM fellows.

Topics and Instructors/Speakers:

|   |  |   |                        |
|---|--|---|------------------------|
| September 1   | Intro/Networking Session   |   | 8:00 – 9:30 AM         |
| September 5   | Business Model Innovation<br>Business Model Formulation                        | Solomon Darwin  | 7:00 - 10:00 AM        |
| September 7   | Open Business Models and Ecosystems  | Solomon Darwin  | 7:00 - 10:00 AM        |
| September 9   | Design Thinking  | Ben Bradbury  | 7:00 - 10:00 AM        |
| September 12  | Design Thinking  | Ben Bradbury  | 7:00 - 10:00 AM        |
| September 14  | Lean Launchpad   | Rhonda Shrader ***  | 7:00 - 10:00 AM        |
| September 16  | Lean Launchpad   | Rhonda Shrader ***  | 7:00 - 10:00 AM        |
| September 19  | Lean Launchpad   | Rhonda Shrader ***  | 7:00 - 10:00 AM        |
| September 21  | Know the Technology useful for your projects                                   | Gauthier Vasseur  | 7:00 - 10:00 AM        |
| September 23  | Project Execution and Ground Realities<br>Working with Smart Villages Movement | Dr. Anil Shah,<br>SVM Fellows   | 7:00 - 10:00 AM        |
| 1-hour weekly mandatory mentor session and progress presentations; 30-minute weekly mandatory SVM fellow session<br><br><b>Student Work</b> : Work on the topic and prepare the PPT summary to be ready for presentation on Monday<br><br><b>TA Work</b> : Arrange 2 for the presentation; Next week example prepared |  | Corporate Mentors and SVM Fellows   | Varies per group (TBD) |
| September 26 –<br>September 30  | What for Whom for What<br>and Value Proposition                                | 2 presentations (20 mins)<br>+ 10 mins mentor<br>feedback<br><br>30 mins students Q&A |                        |
| October 3 –<br>October 7  | Customer Segments and Product Market Fit                                       | 2 presentations (20 mins)<br>+ 10 mins mentor<br>feedback<br><br>30 mins students Q&A |                        |

|                              |  |   |  |
|------------------------------|--|---|--|
| October 10 –<br>October 14   | Revenue Streams and Distribution Channels            | 2 presentations (20 mins)<br>+ 10 mins mentor<br>feedback<br><br>30 mins students Q&A |  |
| October 17 –<br>October 21   | Customer Relationships and Activities &<br>Resources | 2 presentations (20 mins)<br>+ 10 mins mentor<br>feedback<br><br>30 mins students Q&A |  |
| October 24 -<br>October 28   | Partners and Costs                                   | 2 presentations (20 mins)<br>+ 10 mins mentor<br>feedback<br><br>30 mins students Q&A |  |
| November 14 –<br>November 17 | Final Presentations                                  |   |  |

**Grading Criteria:** Pass/Fail - Based on feedback provided by the SVM fellows on the deliverables submitted

**Class Start Date:** September 1, 2022

**Final Project Submission Date:** November 18, 2022

**Address:** [www.smartvillagemovement.org](http://www.smartvillagemovement.org)

**Inquiries for OIP:** [info@smartvillagemovement.org](mailto:info@smartvillagemovement.org)

**Program/Participant Support:** [innovationandanalytics@berkeley.edu](mailto:innovationandanalytics@berkeley.edu)

**Correspondence:** All communication must happen on the SVM platform for proper tracking of the project progress  
(No telephone calls – It will be all digital)

# Prospective Firms

| Education/ Livelihood | Agriculture         | Healthcare/ Sanitation | Energy         | ICT          | Rural Transport | Safety/ Security     |
|-----------------------|---------------------|------------------------|----------------|--------------|-----------------|----------------------|
| 1. Salesforce         | 18. Agrikal         | 37. Apollo Hosp.       | 59. Enel       | 64. Airtel   | 68. Hero Cycles | 73. 3rd Eye          |
| 2. SAP                | 19. Agrinos         | 38. Cosine Labs        | 60. Indian Oil | 65. Reliance | 69. Maruti      | 74. Digital Twins    |
| 3. Adobe              | 20. Agri Yoda       | 39. Curofy             | 61. Atum       | 66. Ericsson | 70. MeeBuddy    | 75. Johnson Controls |
| 4. Amazon             | 21. BigHaat         | 40. Reddy Labs         | 62. Cygni      | 67. Tarana   | 71. Trringo     | 76. Tyco             |
| 5. Google             | 22. eFresh Global   | 41. EarthEnable        | Energy         | Wireless     | 72. Wipro       |                      |
| 6. IBM                | 23. Fascrop         | 42. GOQii              | 63. Hygge      |              |                 |                      |
| 7. Khan Academy       | 24. ftcash          | 43. Gramin             |                |              |                 |                      |
| 8. LearnOnMobile      | 25. IBM Weather     | 44. HealthCube         |                |              |                 |                      |
| 9. LinkedIn           | 26. Janani Foods    | 45. Ketos              |                |              |                 |                      |
| 10. Microsoft         | 27. Kisan Saathi    | 46. Mr. Clean          |                |              |                 |                      |
| 11. NVIDIA            | 28. Kratos          | 47. NetMeds            |                |              |                 |                      |
| 12. Oracle            | 29. NaPanta         | 48. Portea             |                |              |                 |                      |
| 13. Pratham           | 30. Natural Capital | 49. Practo             |                |              |                 |                      |
| 14. 3D Manufacture    | 31. Ninjacart       | 50. Recykal            |                |              |                 |                      |
| 15. The image school  | 32. Plantix         | 51. RedwingLab         |                |              |                 |                      |
| 16. Inno school       | 33. Syngenta Found. | 52. Spry Health        |                |              |                 |                      |
| 17. Teacher app       | 34. Tech Mahindra   | 53. StaTwig            |                |              |                 |                      |
|                       | 35. Waycool         | 54. WEconnect          |                |              |                 |                      |
|                       | 36. Wipro           | 55. YourDOST           |                |              |                 |                      |
|                       |                     | 56. Zero Mass          |                |              |                 |                      |
|                       |                     | 57. 1MG                |                |              |                 |                      |
|                       |                     | 58. A3 RMT             |                |              |                 |                      |

