FAPESP
SÃO PAULO RESEARCH FOUNDATION

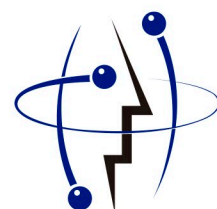# 3rd FAPESP PIPE–High–Tech Entrepreneurial Training Program

3rd **FAPESP PIPE–High–Tech Entrepreneurial Training Program**

March / April / May, 2017

PIPE (Pesquisa Inovativa em Pequenas Empresas):
Innovative Research in Small Businesses

Inovação Tecnológica
PIPE

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The PIPE–High–Tech Entrepreneurial Training
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The **PIPE–High–Tech Entrepreneurial Training,** offered by FAPESP, aims to assist companies funded through FAPESP's **Innovative Research in Small Businesses** program (PIPE in the Portuguese acronym) to develop a robust business model. The goal is to promote sustainable commercial development of the innovative products and services originated from FAPESP PIPE's research projects, generating significant business results. The training methodology is based on Steve Blank's Customer Development and Osterwalder and Pigneur's Business Model Canvas applied to high-tech innovation, similarly to the I-Corps program of the US National Science Foundation.

The São Paulo Research Foundation, FAPESP, has been funding small business research since 1997. The PIPE program focuses on **Innovative Research in Small Businesses**, targeting from startups to medium companies with less than 250 employees. Similarly to the NSF SBIR (Small Business Innovation Research) program, FAPESP's PIPE is divided in two phases. Phase 1 supports proof-of-concept or feasibility assessments, with a duration of up to 9 months. Phase 2 supports the development of the research required to develop the process or product, with a duration of up to 24 months. More than 1,400 PIPE grants have been awarded and since 2013 FAPESP has been awarding approximately 0,9 grants per workday, with a steady growth in the yearly number of awardees – 233 new projects were started in 2016, 69% higher than 2015.

The PIPE–High–Tech Entrepreneurial Training selects 21 teams, based on the quality of their proposals and the benefits they could obtain from participating. Each team is composed of three members. Two of them are nominated by the startup: the Principal Investigator and the Entrepreneurial Lead person for the company. The third member, the Mentor, is assigned by FAPESP from a pool of highly experienced, successful high-tech executives in the State of São Paulo, Brazil.

The training is organized in 4 phases. In Phase 1, the companies prepare their initial business canvas. In Phase 2, the 21 teams will work at FAPESP with the instructors during three days and learn how to interview customers and incorporate their feedback into their businesses. In Phase 3, the teams will conduct dozens of customer interviews in a structured way, adapting their business model as they progress, and have online classes and videoconference sessions with FAPESP instructors. In Phase 4, the teams will meet again at FAPESP in a live session for their final oral presentations.

The training program is based on the Customer Discovery methodology, which is an iterative process of getting out of the office/lab, going to the market to interview potential customers, partners, and competitors, to understand their needs, problems, and difficulties. After each group of interviews, the team evaluates whether the new understanding of the customer needs validates or invalidates the components of its business model. When a team detects that its hypothesis is not valid, they modify the existing business model. This iterative process continues until the team achieves a match between the product/service being offered and the needs of the market. This correspondence is called *Product × Market fit.*

The program will not only help the 21 startups in enhancing their business capabilities, but also develop, within the State of São Paulo, the expertise on how to apply modern startup engineering methodologies for the development of prosperous high-tech companies.

The São Paulo Research Foundation

FAPESP is a public foundation funded by São Paulo taxpayers to promote the development of science and technology in the state, by supporting research projects in institutions of higher education and research, official or private, which are selected by a rigorous system of analysis based on the peer-review process.

São Paulo has a population of 45 million and generates 31% of Brazil's GNP. Under the state Constitution 1% of all state taxes are appropriated to fund FAPESP. The stability of the funding and the autonomy of the foundation allow for an efficient management of the resources that has had a sizable impact: while São Paulo has 22% of the Brazilian population and 36% of the scientists with a doctorate in the country, the state responds for 45% of the country's scientific articles published in international journals.

The effectiveness of research carried out in São Paulo is the combined result of several factors that include the quality of the state's universities and institutes, the productivity of its researchers, high rates of participation by private, São Paulo-based companies that function within the state's R&D outlays, São Paulo's outstanding infrastructure, and the existence of FAPESP, a well-designed state research-sponsoring agency governed, maintained by its directors with excellence and with autonomy over the past half century.

Within this context, in 2016 FAPESP applied 630 million in $ purchasing power parity (PPP) in scholarships and grants.

In accordance with the Foundation's funding objectives, 39% of expenditure was earmarked for advancing knowledge, 8% was dedicated to supporting research infrastructure and 53% was allocated to supporting application-driven research.

FAPESP works in close contact with the scientific community: all proposals are peer reviewed with the help of panels composed of active researchers from the specific area. Many times scientists in São Paulo submit proposals for programs to the foundation which are carefully analyzed and, if deemed strong in academic terms, are shaped by the foundation into research programs that will constitute a set of related research projects in a given area.

Since FAPESP's mandate is to foster research and scientific and technological development in the state, ideas for programs that couple world class research with contributions that will impact social problems are welcome.

Inovação Tecnológica
PIPE

• **Innovative Research in Small Businesses**
## Aims and Objectives

FAPESP's Innovative Research in Small Businesses Program (PIPE), established in 1997, aims to support the development of innovative research projects carried out in small businesses, i.e., companies with up to 250 employees, in the State of São Paulo. Centered on significant scientific and technological problems that have a high potential for commercial or social return, the projects are carried out by researchers who have formal links to the small businesses or who are associated with them for the implementation of the project.

The FAPESP PIPE objectives are:
- To use technological innovation as an instrument to increase the competitiveness of small companies;
- To create conditions to enhance the research system's contribution to economic and social development;
- To foster an increase in private investment in technological research;
- To enable the collaboration of small businesses with academic researchers on innovation projects;
- To contribute for the establishment of a culture that values research activities within business environments, technological innovation within small companies, and the employment of researchers in the private sector.

FAPESP Organizing Committee

Coordination
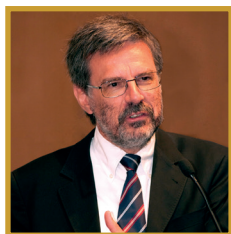
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An electronic engineer and a physicist, Brito Cruz is a professor at the Gleb Wataghin Physics Institute, of the State University of Campinas (Unicamp), where he was the rector from 2002 to 2005.

He graduated in electronic engineering at the Aeronautics Technology Institute of (ITA in the Portuguese acronym). He took a master's degree and a doctorate at Unicamp's Gleb Wataghin Physics Institute. He has been a professor at the Unicamp's Physics Institute since 1982. Presently is a full professor at the Quantum Electronics Department.

Brito Cruz was a visiting researcher at the Quantum Optics Laboratory at the Universitá di Roma, at the Femtosecond Research Laboratory at the Universitè Pierre et Marie Curie. and a resident researcher at the AT&T's Bell Laboratories, in Holmdel, New Jersey. At Unicamp he was the Director of Unicamp's Physics Institute from 1991 to 1994 and from 1998 to 2002; Pro-rector for Research from 1994 to 1998, and Rector of the university from 2002 to 2005. He was the the President of FAPESP from 1996 to 2002.

Brito Cruz is a member of the Brazilian Academy of Sciences and a Fellow of the American Association for the Advancement of Science. He received the Ordre des Palmes Academiques de France, the Order of the Scientific Merit from the Federative Republic of Brazil and the Order of the British Empire, Honorary (OBE) in 2015.

FAPESP Organizing Committee

Adjuncts

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Received the degree of Electronic Engineer from the Universidade Federal do Rio de Janeiro(1966), M.Sc. in Electrical Engineering from the Coordenação dos Programas de Pós-Graduação de Engenharia-COPPE/UFRJ,(1967) and Ph.D in Biomedical Engineering from the University of Pensylvania,(1971). Grynszpan was the head of the Department of Biomedical Engineering (1973-1976) and became Full Professor of COPPE/UFRJ(1975).

He became the head of COPPETEC, in charge of the University projects to Industry and Government (1976-1985) and the head of the Technology Innovation Center (1985-1986), to comercialize the University research results. In 1987, he founded the Technological Park of Rio de Janeiro, with 73 companies specialized in IT and Telecom. He, then, became the President of Riotec, the company that managed the research activities of the park. He was ellected as Vice President of The International Association of Science Parks (1986 to 1989).

Grynszpan founded and headed the Brazilian Association of Biomedical Engineering (1971), was a member of the Conselho Tecnico Cientifico of CAPES/MEC (1975) and Member of the Board of Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) from 1998 to 2002.

In 1989, he became the President of Motorola in Brazil, where he stayed from ten years and was responsible for bringing and installing Motorola´s manufacturing facilities in Jaguariuna, São Paulo. In this plant, Motorola manufactured all cellular phones, radios and pagers sold in Brazil and exported to Latin America.

He became Vice President of Abinee – the Brazilian Electronic Industrial Association, until 2001, Member of the Board of Trustees of FIA – Fundação Instituto de Administração,(2000-2006) and Director of Anpei, the Brazilian Association of Innovative Enterprises, until 2008.

He is a Visiting Professor of the MBA Program of the Fundação Instituto de Administração, Director of the Technology Department of the Centro das Indústrias de São Paulo (CIESP), an organization that supports 8,500 industries in the state of São Paulo, and Member of CONIC – the Council of Innovation and Competitiveness of FIESP – the Federation of Industries of the State of São Paulo.

Grynszpan works as business consultant, specialized in innovation, commercialization of University research and entrepreneurship in Brazil and in the international market. He is now working as a consultant to the University of Virginia.

FAPESP Organizing Committee

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Bachelor's degree in Telecommunications Engineering (1970) and Master's degree in Electrical Engineering (1972) from Pontifical Catholic University of Rio de Janeiro. Graduated from Corporative Governance Brazilian Institute as Administrative Counselor (2009).

Served as a college professor. Former President (1990-1994) and currently Emeritus Member of Telecommunications Brazilian Society.

Worked at CPqD (Telecommunications R&D Center), since its creation (1976), in several areas: digital transmission, optical communication, microelectronics, technological and strategic planning.

TELEBRÁS R&D Director (1995-1998) , CPqD's President (1998-2015) and CEO of CPqD Technologies&Systems Inc. (2000-2015). During his mandate CPqD created technology based startups with manifold business model in several areas: next generation network, optical communication systems, telecommunications clearing services, radio communication systems, optical sensors, fraud detection and prevention services, integrated photonics devices.

Has been President of the Administrative Board of Telesc, Telebahia, Padtec, Trópico, Sistel, member of the Administrative Board of Telergipe, Algar, Cleartech, Telebrasil, member of Fórum Campinas Foundation Board of Trustees and Director at Telebrasil.

Presently is Research for Innovation Area Coordination at FAPESP, member of TELEBRÁS Administrative Board, startup Mentor, member of Fiesp Competitivity and Innovation Superior Council and Director at Fiesp Telecommunications Division. Co-founder of Brazil iCorps Institute.

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Bachelors in Business Administration (USP, 1996), MSc in Business and Planning (PUC, 2002) and PhD in Industrial Engineering (Poli-USP, 2008).

Nakagawa is entrepreneurship and innovation professor at INSPER Institute of Education and Research and entrepreneurship director at FIAP (Faculdade de Informática e Administração Paulista).

Works in the field of Entrepreneurship and Innovation, having published 2 books, co-authored another 3 titles and other papers and articles. He is entrepreneurship columnist at O Estado de São Paulo newspaper and Pequenas Empresas, Grandes Negócios magazine.

He also carries out research in the fields of new business creation, innovation management, corporate entrepreneurship and startups. He developed entrepreneurship education programs including Bota Pra Fazer (Endeavor), Inovativa Brasil (MDIC), Empreenda e Conexões (SENAC) e StartupOne (FIAP).

Nakagawa has more than 20 years professional background in industries such as banking, strategic consulting, venture capital, innovation, private equity and education.

FAPESP Organizing Committee

Teaching Assistant

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Technologist in Computer Networks at Modulo Faculty
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He worked in retail companies in the manufacturing industry, at the technical support area and IT coordination. During 1999 and 2005 he participated in administrative systems deployments projects, installation projects and expansion of electronic fund transaction networks, point of sale terminals and logistics.

He is currently a member of the web development team in the Information Services Department at Polytechnic School of Engineering in University of São Paulo. He participates in engineering education projects in the role of technical support for videoconferencing and distance learning.

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Course Syllabus

Course Dates

Kickoff workshop	March, 20-22, 2017
Online classes	March 27, April 03, 10, 17 and 24
Closing workshop	May 08 and 09

Course Expectations

Each team member should commit to attending every planned session of the program. Each team must have two members that can commit to class time plus approximately 15-20 additional hours per week, for the full seven weeks of the program, on customer discovery and exercises outside of class. Additional team members must commit to 6-8 hours a week.

Course Description

Customer Discovery is an iterative process of physically getting out of the building to interview potential customers and stakeholders to understand their problems and pain points in the market and in society. These interviews, or experiments, lead to real-world learnings and insights that validate or invalidate key components of the business model, often leading to pivots.

This course will provide teams with real-world, hands-on learning experience with customer discovery and successfully transferring knowledge into products and processes that benefit society. The entire team will engage with industry. You and your team will spend your time talking to and learning from customers, partners and competitors, and learning how to deal with the chaos and uncertainty of commercializing innovations and creating ventures.

This course is about getting out of the building. You will be spending a significant amount of time outside the building, talking to customers and testing your hypotheses about what they want in products and services. We will spend our limited class time on what you learned from talking to customers, not what you already knew coming into the course. Teams should be striving for 15 interviews per week, for a total of 100 interviews by the end of the course.

Class Culture

We have limited time and we push, challenge, and question you in the hope you will quickly learn. We will be direct, open, and tough – just like the real world. We hope you can recognize that these comments aren't personal, but part of the process. We also expect you to question us, challenge our point of view if you disagree, and engage in a real dialog with the teaching team. This approach may seem harsh or abrupt, but it is all part of our wanting you to learn to challenge yourselves quickly and objectively, and to appreciate that as entrepreneurs, you need to learn and evolve faster than you ever imagined possible.

Course Syllabus

Additional Resources

1) These short videos from Steve Blank provide helpful tips and examples for preparing for your customer interviews.

https://vimeo.com/groups/204136/videos

Pre-Planning Pt. 1	(4'55)
Interviews Pt. 1	(5'40)
Interviews Pt. 2	(3'49)
Asking the Right Question	(2'37)
Assuming you know what the customer wants	(1'56)
Understanding the Problem (the right way)	(3'22)
Customers Lie	(2'37)
The Distracted Customer	(3'12)
Engaging the Customer	(3'37)
Customer Empathy	(2'25)
The User, the Buyer & the Saboteur	(2'24)
Death by Demo 1	(2'18)
Death by Demo 2	(1'45)

2) For a more detailed explanation of Customer Development and the Lean Startup, here are some short videos of Steve Blank from the Kaufmann Founders School.

http://www.entrepreneurship.org/Founders-School/The-Lean-Approach/Getting-Out-of-the-Building-Customer-Development.aspx
http://www.entrepreneurship.org/Founders-School/The-Lean-Approach/Customer-Development-Data.aspx
http://www.entrepreneurship.org/Founders-School/The-Lean-Approach/Minimum-Viable-Product.aspx

3) All team members should purchase the textbooks outlined on the following page. The Osterwalder books have free e-version previews, and the Constable book has a full free e-version.

Value Proposition and Design
Alexander Osterwalder, Yves Pigneur, Greg Pernarda & Alan Smith
A free download of the first chapter of the book is available at
https://strategyzer.com/value-proposition-design?_ga=1.152090042.2059273423.1389715841

Talking to Humans
Giff Constable
A free download of the book is available at
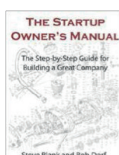http://www.talkingtohumans.com

Business Model Generation
Alexander Osterwalder & Yves Pigneur
A free download of the first chapter of the book is available at
http://businessmodelgeneration.com/book

The Startup Owner's Manual
Steve Blank & Bob Dorf

Course Syllabus

Required Pre-Kickoff Assignments

Register for the free Udacity online course – How to Build a Startup (https://www.udacity.com/course/ep245) and watch the following lectures:

- Lesson 1:   What we Now Know
- Lesson 1.5A: Business Models
- Lesson 1.5B: Customer Development
- Lesson 2:   Value Proposition
- Lesson 3:   Customer Segments

Highly Suggested Pre-Kickoff Assignments

The following assignments augment the required assignments, and should be used to provide a greater understanding of the material. At a minimum, we recommend that you scan these readings.

- *Business Model Generation* – pages 14-51
- *The Startup Owner's Manual* – pages 195-199
- *"12 Tips for Early Customer Development Interviews"* by Giff Constable:
  (http://giffconstable.com/2010/07/12-tips-for-early-customer-development-interviews)

Required Deliverables for the Kickoff Workshop

1. A two-slide presentation. You *may* be called upon to present to the whole class and will *definitely* present to a group of peers and instructors in a breakout session. See the template provided on the following page.
2. Ten or more customer/industry contacts that you hope to interview on Day 2 of the Kickoff Workshop (March 21)

Presentation Template for the Kickoff Workshop

Slide 1:   Title Slide
            Team Name
            University or company logo
            Product or technology picture & description (1 sentence)
            Pictures & names of your team members
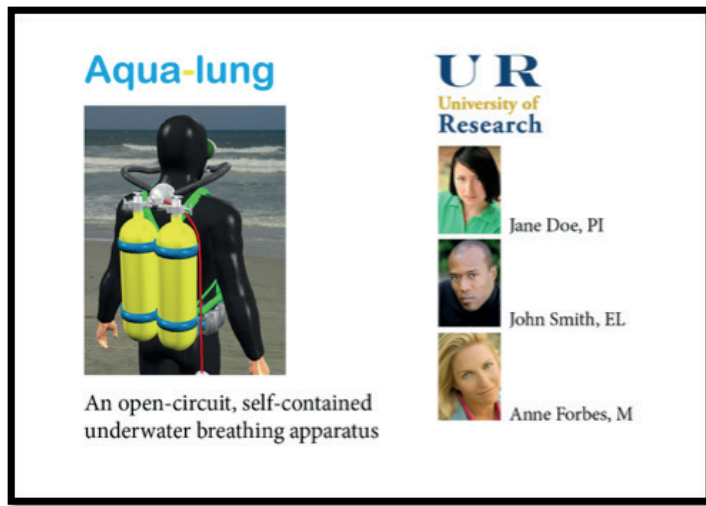
Slide 2:   Populated Business Model Canvas

Download template from: http://www.businessmodelgeneration.com/downloads/business_model_canvas_poster.pdf

Use the questions in the image below to guide your answers – focus on Customer Segments & Value Propositions

Key Partners 6	Key Activities 7	Value Propositions 1	Customer Relationships 4	Customer Segments 2
Who are your key partners? Who are your key suppliers? What are you *getting* from them...and *giving* to them?	What key activities do you require? Manufacturing? Software development? Personal concierge service? Etc.	What customer *problems* are you helping to solve? What customer *needs* are you satisfying?	How will you *get*, *keep* and *grow* customers?	Who are your most important customers? What are their *archetypes*? What job do they want you to get done for them?
	Key Resources 8 What key resources do you require? Financial? Physical? Intellectual property? Human resources?	What are key features of your product/service that match customer problems/needs?	**Channels 3** Through which channels (sales, distribution, support) do you customers *want* to be reached?	
Cost Structure What are most important costs inherent in your business model? What is mix of fixed and variable costs? 9			**Revenue Streams** How will you make money? What is revenue model? What are pricing tactics? 5	

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Kickoff Workshop: Schedule at-a-glance (All times are GMT-3)

Date	Time	Topic	Location
Thursday, March, 14	2:00 pm - 4:00 pm	Kickoff meeting with all teams to review requirements, logistics, and to connect mentors to teams	Auditorium
Monday, March, 20	8:00 - 8:30 am	Registration	Lobby
	8:30 - 9:00 am	Welcome & Introduction	Auditorium
	9:00 - 10:30 am	**Lecture #1**: Using Customer Discovery to Build a Business Model, Customers & Value Propositions	Auditorium
	10:30 - 11:00 am	Coffee Break	Lobby
	11:00 am - 1:00 pm	Team Introductions (21 teams: 3 min presentations/2 min comments)	Auditorium
	1:00 - 2:00 pm	Lunch	Lobby
	2:00 - 2:30 pm	Welcome & Introduction by FAPESP	Auditorium
	2:30 - 3:15 pm	**Lecture #2**: Best Practices for Customer Discovery Interviews	Auditorium
	3:15 - 4:30 pm	Workshop #1: Team Practice Interviews & Informal Office Hours	Breakout Rooms
	4:30 - 4:45	Coffee Break	Lobby
	4:45 - 5:15 pm	Mentor/PI/EL Workshops	Breakout Rooms
	5:15 - 5:45 pm	LPC Training	Auditorium
Tuesday, March, 21	All Day	Customer Interviews – in person at customer location	Sao Paulo & surrounding area
	8:00 - 9:30 am or 4:30 - 6:00 pm	Office Hours (20 min sessions – teams will choose one slot based on their interview schedules)	Breakout Room
Wednesday, March, 22	8:00 - 8:30 am	Welcome Back, Q&A, Discussion	Auditorium
	8:30 - 9:30 am	**Lecture #3**: Channels	Auditorium
	9:30 - 10:30 am	Team Presentations (3 teams each in 2 rooms: 15 minute presentations/comments)	Breakout Rooms
	10:30 - 11:00 am	Coffee Break	Lobby
	11:00 am - 12:00 pm	Team Presentations (3 teams each in 2 rooms: 15 minute presentations/comments)	Breakout Rooms
	12:00 - 1:00 pm	Lunch	Lobby
	1:00 - 2:30 pm	Team Presentations (5 teams each in 2 rooms: 15 minute presentations/comments)	Auditorium
	2:30 - 3:00 pm	WebEx Training	Auditorium
	3:00 - 4:30 pm	Optional Office Hours	Breakout Rooms

Online Classes: Assignments

Required Assignments

You should watch all of the videos in the "*How to Build a Startup*" course (https://www.udacity.com/course/ep245).
You can watch these at your own pace, but must have completed by the dates shown below.

By October and November

- Lesson 4:   Channels
- Lesson 5:   Customer Relationships
- Lesson 6:   Revenue Models
- Lesson 7:   Partners
- Lesson 8:   Resources, Activities, and Costs

Additional Assignments

The teaching team may assign additional short readings or tasks throughout the course as deemed necessary based on the progress of teams.

Online Classes: Schedule at-a-glance (All times are GMT-3)

Date	Time	Topic
Monday, March 27	1:30 - 2:00 pm 2:00 - 4:00 pm 4:00 - 5:00 pm	**Test WebEx** **Team Presentations** Teams present their business model canvas in three concurrent tracks. Each team is allotted 12 minutes total to include 10 minutes for presentations and 2 minutes for teaching team comments. **Lecture #4: Problem Solution Fit** Value Proposition Canvas: Customer Profile & Value Map, Customer Pains/Gains
Monday, April 3	1:30 - 2:00 pm 2:00 - 4:00 pm 4:00 - 5:00 pm	**Test WebEx** **Team Presentations** Teams present their business model canvas in three concurrent tracks. Each team is allotted 12 minutes total to include 10 minutes for presentations and 2 minutes for teaching team comments. **Lecture #5: Customer Relationships & Revenue Models**
Monday, April 10	1:30 - 2:00 pm 2:00 - 4:00 pm 4:00 - 5:00 pm	**Test WebEx** **Team Presentations** Teams present their business model canvas in three concurrent tracks. Each team is allotted 12 minutes total to include 10 minutes for presentations and 2 minutes for teaching team comments. **Lecture #6: Key Partners**
Monday, April 17	1:30 - 2:00 pm 2:00 - 4:00 pm 4:00 - 5:00 pm	**Test WebEx** **Team Presentations** Teams present their business model canvas in three concurrent tracks. Each team is allotted 12 minutes total to include 10 minutes for presentations and 2 minutes for teaching team comments. **Lecture #7: Lessons Learned Presentations & Story Videos** Overview and directions for the final course deliverables
Monday, April 24	1:30 - 2:00 pm 2:00 - 4:00 pm 4:00 - 5:00 pm	**Test WebEx** **Team Presentations** Teams present their business model canvas in three concurrent tracks. Each team is allotted 12 minutes total to include 10 minutes for presentations and 2 minutes for teaching team comments. **Lecture #8: Business Model Fit** Resources, Activities and Costs: how to build and validate the rest of your business model

Lessons Learned Workshop: Schedule at-a-glance (All times are GMT-3)

Date	Time	Topic	Location
Monday, May 8	8:30 am - 9:00 am	Welcome Back	Auditorium
	9:00 am - 10:30 am	Lecture & Discussion: Preparing Lessons Learned Presentation & What's Next	Auditorium
	10:30 am - 10:45 am	Coffee Break	Lobby
	10:45 am - 12:45 pm	Review Videos & Draft Presentations	Breakout Rooms
	12:45 pm - 1:45 pm	Lunch	Lobby
	1:45 pm - 4:30 pm	Individual Team Meetings Teams will be separated into 3 groups and assigned a 20 minutes time slot with an Instructor to discuss next steps and answer questions.	Breakout Rooms
Tuesday, May 9	8:00 am - 8:30 am	Registration	Lobby
	8:30 am - 9:00 am	FAPESP Introduction of Final Presentations	Auditorium
	9:00 am – 10:45 am	Team Presentations: 6 teams (10 min presentations/5 min comments)	Auditorium
	10:45 am - 11:00 am	Coffee Break	Lobby
	11:00 am - 12:30 pm	Team Presentations: 5 teams (10 min presentations/5 min comments)	Auditorium
	12:30 pm - 1:30 pm	Lunch	Restaurants around FAPESP
	1:30 pm - 3:00 pm	Team Presentations: 5 teams (10 min presentations/5 min comments)	Auditorium
	3:00 pm - 3:15 pm	Coffee Break	Lobby
	3:15 pm - 4:45 pm	Team Presentations: 5 teams (10 min presentations/5 min comments)	Auditorium
	4:45 pm - 5:15 pm	Closing Ceremony	Auditorium

List of selected companies

#	Company name	Mentors	Co-Mentors	Name of the project
1	Aptor Consultoria e Desenvolvimento de Software	Valério Dornelles	Eliane Dias	Ambiente lúdico adaptativo como ferramenta para proporcionar treinamento cognitivo ao público senescente
2	Aura Ind. e Com. de Equipamentos Médicos e Eletrônicos	Jorge Marinho		Processo de fabricação de nanofibras biopoliméricas aplicadas em dispositivos médicos
3	Autaza	Alexandre Maurício		Inspeção automática de qualidade de superfícies para avaliação quantitativa de chapas estampadas na indústria automotiva
4	Cordeiro Biz	Alberto Ozolins		Sistema operacional customizado em ovinocultura: caracterização de rebanhos e sistematização dos dados como ferramentas complementares à consultoria técnica
5	Eccaplan – Consultoria em Desenvolvimento Sustentável	Sérgio Bergamini		Análise da viabilidade técnico-econômica de um sistema automatizado de compostagem acelerada, eficiente energeticamente e de baixo custo
6	Eleve PDI Pesquisa e Desenvolvimento	Christine Nogueira		Estabelecimento de um modelo de pele tridimensional para o desenvolvimento e avaliação da eficácia de formulações cosméticas fotoprotetoras e antienvelhecimento
7	Extremus Smart Surfaces	Stefan Bogdan Barenboim-Salej		Recobrimento osteocondutivo multiescala em superfície de implantes a base de titânio
8	Hoobox Robotics Tecnologia do Brasil	Antonio Carlos Bordeaux-Rego		Wheelie e Gimme, tecnologia inovadora para dirigir cadeira de rodas
9	CiaCamp	Luiz Carlos H. Tomita	Ayrton Aguiar	Molécula antioxidante no controle de doenças em plantas: o N-acetil-cisteína (NAC)
10	Immunogenic Assessoria e Diagnóstico em Saúde	Norma Garcia	Eduardo Giacomazzi	Aperfeiçoamento e inovação aplicados ao teste de triagem neonatal para imunodeficiências congênitas
11	Itatijuca Biotech	Marcello L. Pilar	Arnaldo Azevedo	Processo inovador de desvulcanização biológica de borracha
12	Laboratório Biosintesis P&D do Brasil	Marina Kobayashi	Adamilton Oliva	Desenvolvimento e obtençao de suportes ("scaffolds") celulares poliméricos biofuncionais para aplicaçoes na engenharia de tecidos como substitutos biológicos in vitro
13	Mellífera – Consultoria Tecnológica Eireli	Jarib Fogaça		Análise da viabilidade produtiva e econômica de um novo protótipo coletor de apitoxina, na coleta da apitoxina em apiários pertencentes a apicultores associados em associações de apicultura no estado de São Paulo
14	Mocap Brasil Serviços em Tecnologia	Jorge Salomão Pereira	Israel Guratti	Captura de movimento via sensores inerciais do tipo MEMS e magnetômetros de baixo custo para aplicações em biomecânica
15	Nexlab Soluções Tecnológicas	Cláudio Violato	Carlos Cantelli	Projeto, desenvolvimento e montagem do protótipo de um microinversor fotovoltaico que cumpra os requisitos da Norma Brasileira NBR 16149:2013, NBR 16150:2013 e NBR IEC 62116: 2012
16	ProInsecta Pesquisa e Desenvolvimento	Carlos Calmanovici	Roberto Paranhos	Criação artificial de black soldier fly (*Hermetia illucens*) e produção de biomassa de inseto para alimentação animal
17	Sureale	José Eduardo Martins	Loraine Mondini	Solução para interação com maquetes virtuais arquitetônicas dinâmicas e de alto realismo visual por meio de tablets e smartphones
18	Symbiotec Aquicultura e Sistemas Integrados de Produção	Luiz Trivelatto		Aquicultura Multitrófica Integrada: produção de tilápias, hortaliças e macrófitas aquáticas em um sistema de recirculação de água
19	Tau Flow Engenharia	Verônica Peixoto	Jadir Nunes	Estudo de viabilidade da integração da tecnologia de controle térmico com a análise termo fluidodinâmica para aumento de produtividade em criadouros de animais
20	ViaFauna Estudos Ambientais	Celso Barbosa	Ricardo Marar	Desenvolvimento de sistema de detecção animal antiatropelamento em rodovias – "Passa Bicho"
21	Ziel Biosciences Pesquisa Desenvolvimento Diagnóstico	Deusa Marcon	Roberto do Couto	Potencial diagnóstico e prognóstico de novos marcadores de neoplasia de colo uterino

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