"To all you kids down there..." - Richard Branson's message from zero gravity.

Leaders Setting Daring Examples

Leaders Inspiring leaders to be responsible & Innovative

PERFORMATICA
STRATEGY · OPERATIONS · TECHNOLOGY · ALLIANCES

Leadership Development

In an era of rapid technology advancement & social upheaval

Agenda

Section	Topic	Speaker/s
Topic Introduction (moderator)	Welcome & Introductions	Murthy Divakaruni
	Speakers Introductions & Setting the stage	John Baumgartner, Ex-CFO, Amoco Business, Chief of Staff, BP
Leadership & Innovation (Panelist Remarks)	1. Industry, Organization & Innovation	Dr. Phiroz Darukhanavala, Ex-CTO, BP
	2. Digital & Social Leadership and Innovation	Dr. Tilak Agerwala. ex-VP- IBM, Research
	3. Practicing Inventor navigating modern technology	Mr. Edan Prabhu, Sustainable Planet enthusiast, inventor, innovator
	4. Next Gen Leadership - nurturing Life-long learning & re-inventing career paths	Dr. Pavlou, Dean at Bauer College of Business, University of Houston
Panel	Discussion and Q&As	Moderated by Mr. John Baumgartner
Takeaways and Models	Helping organizations and communities deliver Innovation and Leaders for tomorrow	John Baumgartner & Murthy D

Digital Leadership in the era of changing industry, business & technology models

- Give access to experts' experience & capability
- Inspire & inculcate innovation, values and enable thought leadership
- Create ecosystem for easier start-ups, effective scale up for social projects
- Through social experimentation, demonstration of value, create platforms & help facilitate the next generation of social & business leadership

Changes in **Industry Dynamics**

Changes in **Business Expectations** post Covid-19

Changes in **Technology Provisions**
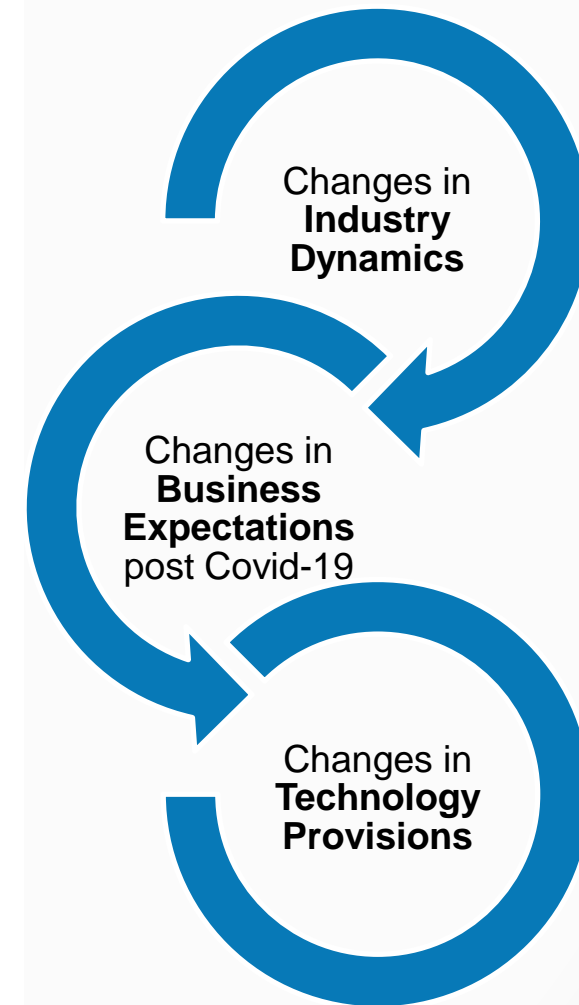
Reflections on 1980 to 2060 (snippets) – biggest lesson is uncertainty

Life c. 1980

- Calculator
- Terminal – Fortran/Cobol
- Landline (no caller ID)
- Hierarchy/lifers

Leadership

- Leader vs. Manager
- Generalist (hire experts)
- Strategic Planning (Porter)
- Classic Marketing, Operations
- Pre – derivatives finance

Life c. 2020

- Hyper automation, AI
- Internet of things
- Augmented humans
- Autonomous transport
- Digital healthcare

Leadership

- Strategy and technology blur
- Agile, intelligent businesses
- Social values; pervasive control
- Network effects; income disparity
- Generalist or functional expertise ?
- Leadership or new models ?

Life c. 2060

- Utopia or Dystopia (1984)
- Space travel and resources
- Limitless new energy sources
- Personalized ed. , health
- Anything, anytime, anywhere

Leadership

- Digital supreme?
- Radical new models based on collaboration?
- Personalized – separate micro-transactions with each person?

Leaders as the Panelists in today's webinar

| Dr Tilak Agerwala	Dr Darukhanavala	Dr Paul A. Pavlou	Mr Edan Prabhu
Panelist	Panelist	Panelist	Panelist
ex-VP, IBM Research, Executive-in-Residence at the Grove School of Engineering, New York	Industry Advisor, Energy & Power, Technology Innovation, Ex-CTO, BP	Dean, C.T. Bauer College of Business, University of Houston	Industry Advisor, Sustainable Planet enthusiast, Inventor & Innovator

Panelists:

Dr. Tilak Agerwala, ex-VP at IBM Research
Dr. Darukhanavala, ex-CTO of BP
Mr. Edan Prabhu, Sustainable Planet enthusiast, innovator, Ex-Research Head- Southern Cal Edison
Dr. Pavlou, Dean, Bauer College of Business, University Of Houston

Moderator: John Baumgartner, an ex-Chief of Staff at BP and CFO, Amoco Business
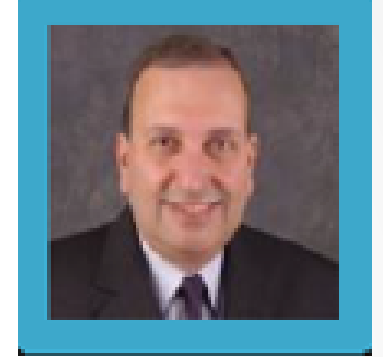
Performatica Webinar

Dr. Phiroz "Daru" Darukhanavala
Vice President and CTO (Retired), BP plc

North Sea: Reduce rotating equipment failures by getting timely data on equipment performance from the bowels of an oil supertanker

Gulf Of Mexico: Provide proof of air and water quality across the 615,000 square mile expanse of the Gulf of Mexico

German refinery: Ensure no errors in refinery isolations, properly matching thousands of flanges, blinds and valves in exact sequence

Alaska: Provide Safer, More Efficient Surveillance of Remote Facilities – Trans-Alaska Pipeline- 700 miles

Thunderhorse Platform: Reduce cost, minimize risk and improve the quality of Production Riser inspections 400ft above the water line in the Gulf of Mexico?

Purdhoe Bay Oilfield: Keep track of people, trucks and mobile equipment (no cell service, -50F) on an icy Alaskan expanse the size of Rhode Island

Gas Stations : Cost effectively train 10,000 high turnover retail staff

Operating Model

………. a small team connected to a vast ecosystem of external knowledge sources

Joy's Law

"No matter who you are, most of the smartest people work for someone else."

J

Bill Joy
Founder, Sun Microsystems
Developer, Java Language

Example of "A Grand Challenge"

How can we improve the strength, durability and placement of cement barriers in harsh downhole conditions over the 30+ year life of a well— and monitor cement integrity so that well integrity engineers can intervene if the barrier starts to break down?

How do you address such a challenge?

Innovation: Culture or Process?

Create Culture
--Innovation results

Employ Systematic Process

"People and culture are the most important drivers of innovation. "
McKinsey Quarterly

"There ain't no rules around here. We're trying to accomplish something!" *Thomas Edison*

How do you systematize innovation? "You don't!" *Steve Jobs, Apple*

"Establishing a systematic process to capitalize on creativity is an essential capability…"
Carol Rozwell, VP Gartner

"Though the outcomes of successful innovations appear random, the processes that result in their success often are not." *Clayton Christensen*

Innovation: Adoption and Change

It's about Adoption

"Real artists ship." *Steve Jobs, Apple*

"Creativity is thinking up new things. Innovation is *doing* new things." *Theodore Levitt*

It's about Change

"Don't worry about people stealing an idea. If it's original, you will have to ram it down their throats." *Howard Aiken, computing pioneer*

"If an IT innovation is not *disruptive*… it's an improvement." *Laurie M. Orlov, VP Forrester*

"When you innovate, you've got to be prepared for everyone telling you you're nuts."

Larry Ellison, CEO Oracle

The role of technology leadership in any organization

Meeting business challenges with innovative solutions

Innovation and Digital Leadership

Dr. Tilak Agerwala
VPData Centric Systems, IBM (Retired)
Executive-in-Residence, Grove School of Engg, CCNY
Adjunct Associate Professor, Pace University
Adjunct Professor, NIAS
tilak.agerwala@gmail.com
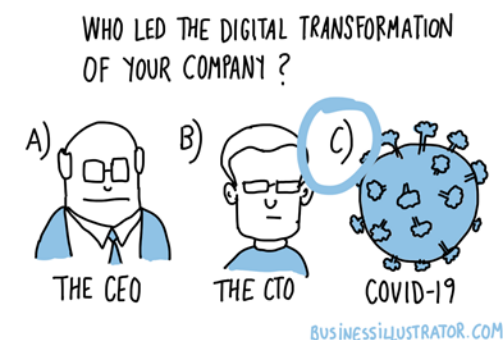
Two Important Trends: Digital and Social Innovation

Digital Innovation
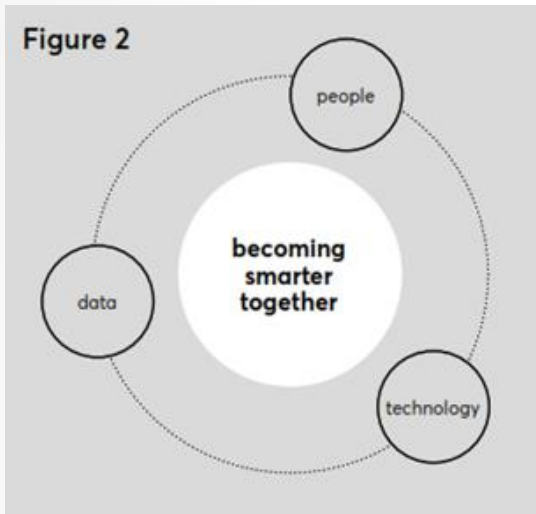
Mobilize a wider range of information, ideas and insights by using digital tools, technologies, and methods for rapid innovation

- Social good
- Productivity gains through automation and augmentation
- Advancing Science and Engineering
- National Security

100's of examples

Social Innovation

An idea — in the form of a product, service or method — that creates change, performs better than existing solutions and for which the value accrues primarily to society.

- Social entrepreneurship becoming crucial
  - Shift from shareholder to stakeholder capitalism.
  - Changing consumer preferences
  - Impact Investing on the rise
  - Address complex problems post-2018 and post-Covid
  - Builds on digital tools and technologies

https://businessjargons.com/social-entrepreneurship.html

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Examples
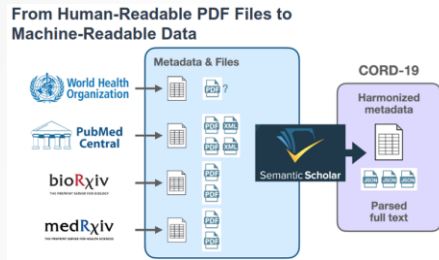
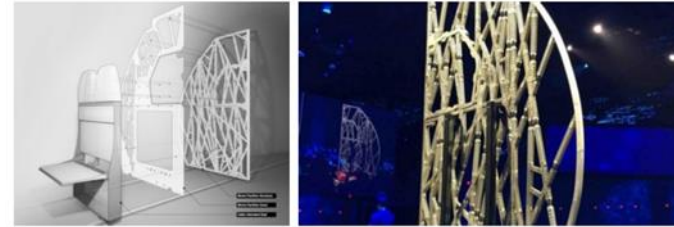**CORD 19- Covid-19 Discovery**
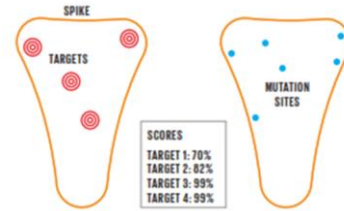
COVID-19 Vaccines

Figure 7.2 This generative designed partition for the Airbus A320, with its seemingly random construction, has been optimally designed to be both lightweight and strong.

Generative Design

Peer support between small farmers using NLP

Citizen Science

Customer Engagement

Crowdsourced Lending

Microfinance

Digital Leadership Skills

Digital organizations
- **Practice digital innovation**
- **Hyper-connected virtual teams and networks**
- **Accelerated Innovation (distributed and open) and disruptive change**
- **New ethical Issues**

Digital Leadership Skills
- **Understand and manage the use of digital technologies and stay current with the newest technological developments**
- **Communicate through digital media with customers, employees, groups, organizations to affect change**
  - Career development, inclusive decision making, Mentoring
  - Leverage hyper-connected environment to develop and sustain an ecosystem.
- **High speed decision making leveraging digital tools.**
- **Have entrepreneurial and risk-taking characteristics**
- **Set clear expectations on ethical behavior and ethical design and for employees and act as role model** (Becomes harder with virtual teams.)

Nurture, Educate, Develop, Inspire

Entrepreneurs ➡ **Digital Leaders** ➕ **Social Entrepreneurs**

- Strong desire to improve the lives of their peers and their community
- Passionate leaders of change.
- Courageous
- Not satisfied by the status quo

One Person's Journey
Prabhu Energy Labs

How an ageing inventor/entrepreneur navigates modern technology

"The New Normal"

# We are a tiny business focused on Climate Change

- We created break-through technology that consumes greenhouse gases to generate power
- We patented it are planning to develop and deploy
- Set up a test lab and successfully tested the only "field" work
- Assembled a world-class team of experts and industries to help
- Achieved all this working in a spare bedroom
- Working in several countries, the US, Europe, India, China
- Twenty years ago, we would need twenty people; five years ago: 5 people. We have two or three, all working at their homes
- We accomplished in two years what would have taken five

Some of our tools

- All Patent searches, all patent filings, electronic, age benefits

- Most meetings are videoconferences

- All documents are in the cloud

- No more landlines, all mobile phones and apps

- All applications prepared digitally and submitted online

- Communications are often more effective with videoconferencing; people are comfortable. The COVID pandemic accelerated use

A passion, an idea, commitment, persistence, timing and luck
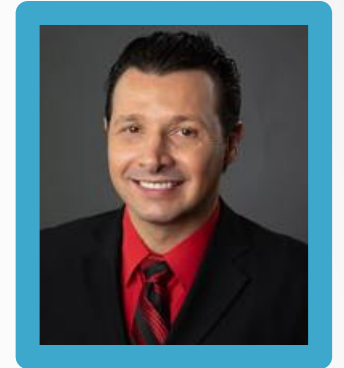
Innovation and Transformation: Higher Education + Industry

DR. PAUL A. PAVLOU
DEAN
C.T. BAUER COLLEGE OF BUSINESS
UNIVERSITY OF HOUSTON

The Future is Our Business

Developing Skills for the Jobs of Tomorrow

- Job market has new demands, and "traditional" approach to education is no longer sufficient

- New ways of thinking about education - curriculum design, experiential learning, global views

- Augmented Intelligence (Humans working with AI and Machine Learning collaboratively next big trend)

Education Grounded in the Real World

- Industry informing higher education on industry needs, demands, and job expectations

- Experiential Learning major trend in higher education (e.g. Reimagining the MBA, Cougar Fund, SURE, Real Estate Clinic)

- Adaptability and Resourcefulness: New emerging trends and ways to work

Inter-Disciplinarity, Globalization, and Social Impact

- Business becoming more inter-disciplinary with the convergence of disciplines

- Interest in global affairs, public policy, and societal impact

Innovation in Career Services & Placement

Experiential Learning

- Technology helped moved our experiential learning online, so teams of students can work on real-world projects with employers from around the world in a secure environment, while allowing the professor to facilitate and oversee these engagements remotely.

Career Counseling

- Career counseling, which has always been a very personal, and therefore in-person service, moved online, and the number of counseling appointments actually went up by 40% because of convenience for students to meet with their career counselors.

Career Fairs

- Career fairs moved online, and we facilitated more than 5,000 one-on-one, online conversations between students and employers where the students did not need to invest in suits or taking a full day off of work to come to campus.

- We could bring in more employers from around the country who did not need to pay for hotels or airfare.

Technology Enhancing Diversity

- Many of our students are working their way through school, and technology is allowing them access to opportunities that were previously more available to "traditional" university students. Also, employers can access a more diverse candidate pool than previously.

Panel Discussions/ Q&As

Panelists:

Dr. Tilak Agerwala, ex-VP at IBM Research
Dr. Darukhanavala, ex-CTO of BP
Mr. Edan Prabhu, Sustainable Planet enthusiast, innovator, Ex-Research Head- Southern Cal Edison
Dr. Pavlou, Dean, Bauer College of Business, University Of Houston

Moderator: John Baumgartner, an ex-Chief of Staff at BP and CFO, Amoco Business

Key Takeaways

- ✓ Leadership challenges will be multi- dimensional as rapid advancements in global business and technology occur. Innovation should be an integral part.
- ✓ Need of the hour is to develop digital leadership in both commercial as well as social ecosystems.
- ✓ Self-development & self- employment will be the corner stones of the future communities. Leaders will be required to demonstrate strong desire to improve the lives of their peers and their community, whether in corporate jobs or in communities.
- ✓ To make an entrepreneur's idea successful, qualities like commitment, persistence and passion are the key ingredients. There will be more opportunities than a VC route.
- ✓ Life-long Learning will be norm in the future. Education protocols will evolve. Colleges are gearing up to remote learning already. Leaders should develop skills for the jobs of tomorrow as well embrace experiential and continuous learning.
- ✓ Technology already exists today to connect globally all the like-minded thought leaders to do social projects, facilitate "those who dare to dream", and demonstrate projects that meet the UN sustainability goals. Lets do them together & jointly!!!

- ➢ **Facilitate & Enable Private & Public Enterprises to be more socially responsible**
- ➢ **Sustaining the Social & Corporate Performance**
  - ✓ **Performance**
  - ✓ **Community Development**
  - ✓ **ESG Accountability**