Scientist/Manager and Entrepreneur: Inspiration, Challenges and Responsibility

Yi Chao
Scientist Career (1993-2011 @ JPL, 2012-)
Aquarius Satellite Project Scientist (2003-2011)
Manager: A brief (2004-2010) trial

- Group Supervisor (10%)
- Deputy Section Manager (25~50%)
- Section Manager (75%)
- Division
- Directorate
- Laboratory
You cannot predict future career without uncertainty!
"You can't connect the dots looking forward; you can only connect them looking backwards. "
Inspired to be an Entrepreneur

✓ 2012: Seatrec, Inc. was established

✓ 2014: Exclusive license signed from Caltech to commercialize the two granted patents (me as one of three inventors) developed at JPL

✓ 2014 – present: Seed stage, pre-revenue, small startup company
Entrepreneur: A well-defined path
Challenge: The valley of death

How to cross the valley of death?
How to cross the valley of death?
It’s About the Money, Stupid!
My experience so far

• SBIR/STTR
  – 3% the federal R&D funding
• Family and Friend
• Startups powered by science (Book: From 0 to 1)
  – Thiel Foundation’s Breakout Labs
• Impact (societal/environmental) investors
  – Schmidt Foundation’s Marine Technology Partners
• Financial Investors (>10X return on investment)
  – Angels (seed stage)
  – Venture Capital (series-A, expected 2018 Q2)
• Strategic Industry Partners (Exit)
Responsibility:
Ocean is not well explored/understood

Seafloor: 5 km
Moon: 10 meter

Ocean as large as Wyoming has never been mapped!
Underwater Power is the limiting factor!
Underwater Systems Rely on Battery

Limited lifetime & Not environmentally sustainable
Harvest energy from temperature differences in the environment.
Harvest energy from temperature differences in the environment.
Again, you can't connect the dots looking forward; you can only connect them looking backwards. So you have to trust that the dots will somehow connect in your future. You have to trust in something - your gut, destiny, life, karma, whatever. This approach has never let me down, and it has made all the difference in my life.

(Steve Jobs)
Thanks! Questions?

Yi Chao
ychao001@gmail.com
(626) 602-6186