

Linking Science and Applications

Ana Maiques

ENVISAT Summer School 2008

Starlab[®]

Climate change



• <http://www.youtube.com/watch?v=zzjOcOcQ90U>

Content of presentation

- How to turn Science into Applications & Business
- Non-technical skills needed
- What the customer/user wants
- Conclusions



How to turn Science
into Applications and
Business?

Starlab[®]

Success Factors in Technology-based Entrepreneurship

These slides are part of the article by
Professor John Preston and are referred to in the text.

Success Factors

Commercialization of Radical Innovations and Building Successful High-Tech Companies

- Attitudes
- Management Teams
- Patents and Sustainable Advantage
- Passionate Behavior
- Quality Investors
- Product Quality and Speed to Market
- Flexibility
- Location of the Company

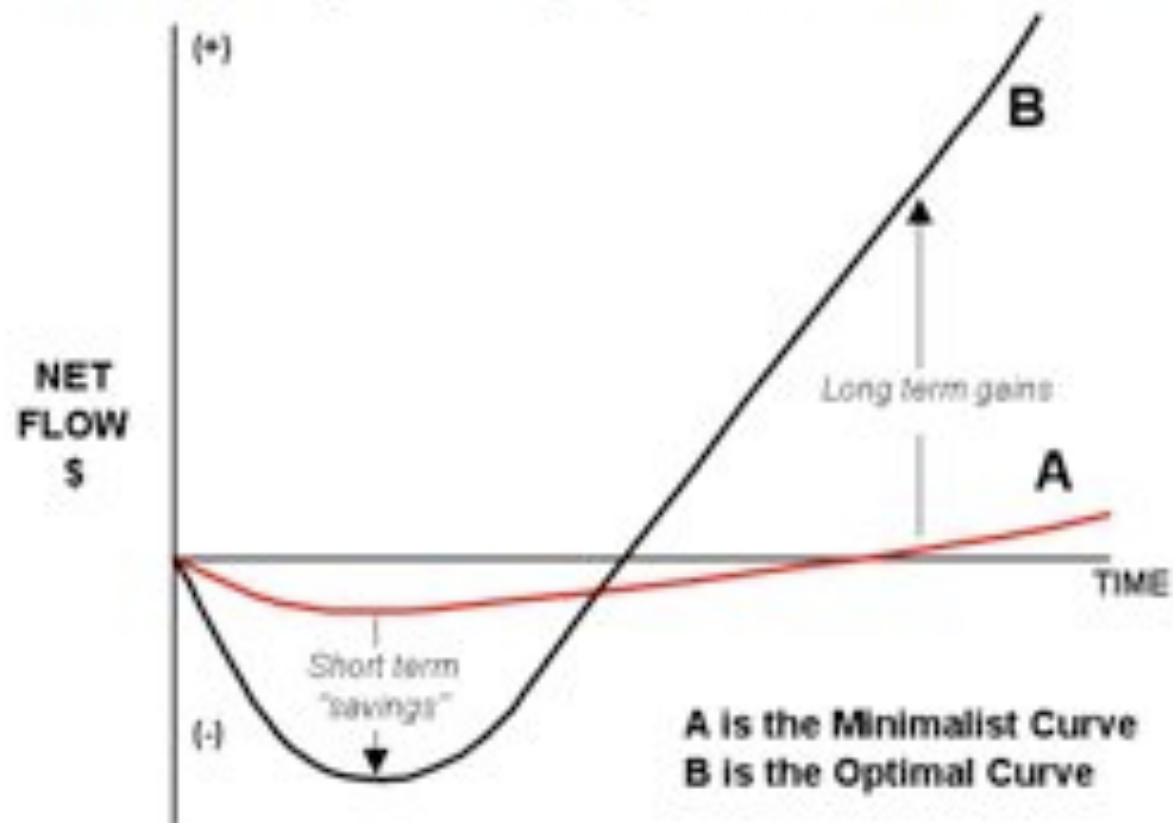
Attitudes: Large Companies vs. Small

- IBM
- Western Union
- Napoleon and Robert Fulton
- Radical Innovation Never Originates with the Market Leader
 - Example: Thomas Edison

Management Teams

- Value of Teams of Entrepreneurs
- Best and Brightest
- Complementary Skills

Financing Capital Equipment and New Technology



SUMMARY

- Reward and Celebrate Success
- Foster Entrepreneurs - the Largest Companies will not Adopt Radical Innovation
- Invest in Long Term "B" Curve (Create Wealth vs. Shift Wealth)
- Build Teams with Complementary Skills
- Quality of the People/Management Determines Success
- Attack the Fiercest Market Early (e.g. USA)
- Move Quickly to the Market (Fast or Dead)
- Eliminate Government Barriers



Non technical skills
needed in the team

Starlab[®]

Passion

“Nothing is so contagious as enthusiasm.”

—Samuel Taylor Coleridge



Tom Peters video on Passion

Tom Peters: Business Should Be Energetic and Passionate



<http://www.youtube.com/watch?v=OYLhthJA6qc>

Execution

- *“This is so simple it sounds stupid, but it is amazing how few oil*

people really understand that you only

find oil if you drill

*wells. You may think you’re finding it when you’re
drawing maps and*

- *studying logs, but you have to drill.”*
- *Source: The Hunters, by John Masters, Canadian O & G wildcatter*

Flexibility

- *“It is **not** the strongest of the species that survives, **nor** the most intelligent, but the one most responsive to change.” —**Charles Darwin***

Adhocracy

- *“If it feels painful and scary—that’s real delegation”*

—**Caspian Woods, small biz owner**

Manager's role

- ***“The role of the Director is to create a space where the actor or actress can become more than they’ve ever been before, more than they’ve dreamed of being.”*** —Robert Altman, Oscar acceptance

Failure as success: TRY

- **Reward excellent failures. Punish mediocre successes.**

Phil Daniels, Sydney exec

Starlab “orders”

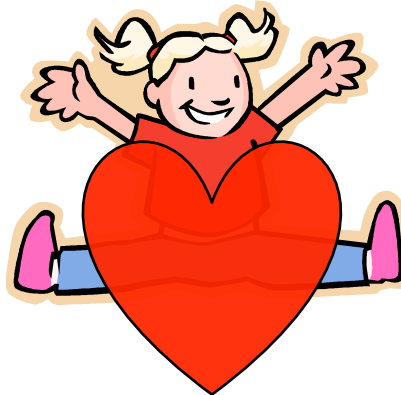
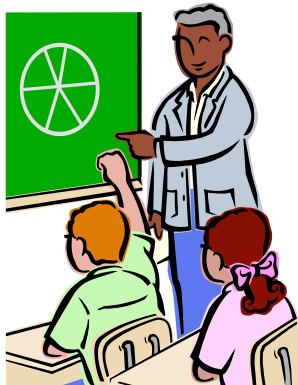
- **1 Start with a real important problem**
- **2 Demo or die**
- **3 One little step at the time, but always forward**
- **4 Work hard, be humble and seek perfection**
- **5 Worship Creativity, Interdisciplinarity, Quality and Excellence**
- **6 Build for others and leave a trace. Be concise**
- **7 Be honest with yourself and others**
- **8 Don't work alone. Be a team player**
- **9 Read and never stop learning**
- **10 Have fun: life is short, at least for now**
- **11 Break the rules. Innovate**

What the client/
user wants from
EO?

Starlab[®]

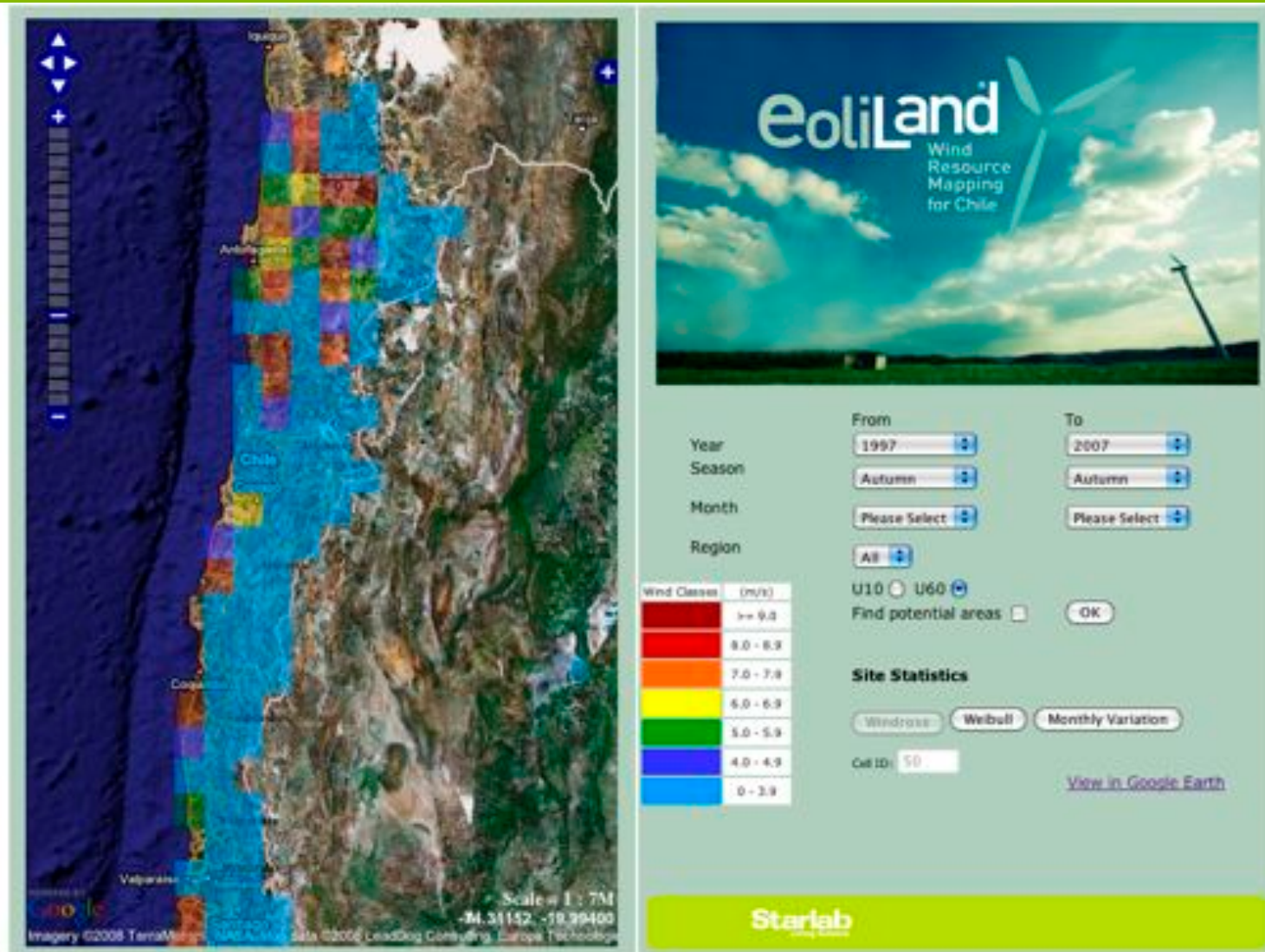
Client's key questions

- Can you (your technology) solve my problem?
- How much does it cost?
- What are the advantages with regards other systems?



Dialogue with users leads to more research!!!

Example 1. Success



Example 2. Spin-off

Star2Earth
Feeling the Earth best

- Home
- Company
- Oceanpal
 - Applications
 - How Oceanpal can help
- Technology
 - Innovation
 - Literature
- Monitored Sites
- Contact us
- Links



Download
Oceanpal
brochure

Introducing Oceanpal. The remote dry solution for sea monitoring.

Oceanpal® is an innovative system that provides sea level and significant wave height using Global Navigation Satellite Systems signals like GPS and the future GALILEO. The instrument compares direct and reflected GNSS signals to infer real time oceanographic information.



Why Oceanpal®?

- Dry (does not touch the water)
- Low maintenance
- Easy to deploy
- Cost effective
- Works regardless of weather conditions
- Portable
- Provides real time data
- Available everywhere via a user friendly Web interface

Oceanpal® is the first product of **Star2Earth**, a new company located on the site of the European Space Research and Technology Center (ESTEC) in Noordwijk, The Netherlands. Star2Earth start-up is supported by the European Space Agency (ESA) through the initiative of European Space Incubator (ESI).

Example 3. Tech transfer



More examples at :
<http://www.esa.int/SPECIALS/TTP2/>

A cooling system derived from astronauts' suits ensures comfort in fire-proof suits

Credits: Courtesy West McLaren Mercedes

Example 4. Failure

Port de Barcelona

The Port Port Authority Logistic Community Services Information

[Promotions](#)

[Logistic Port](#)
 The Port of Barcelona is set up as a large network of facilities and services spread out throughout the region, accessible to clients and offering comprehensive door-to-door logistics services.
 The port premises, in addition to being a major territorial and economic infrastructure, serve as the hub for this set of service centres (port terminals, the Logistics Activities Area, inland maritime terminals, intermodal terminals, depots, etc.), which have global reach and are linked by multimodal transport corridors.
 At these facilities, which operators manage in a decentralized fashion, clients have access to a wide range of handling, transport, logistics and value-added services that facilitate their foreign-trade operations.

[Regular lines](#)
 The Port of Barcelona connects with over 825 ports worldwide through established regular shipping lines, and with its hinterland through an extensive network of road and rail infrastructure. It is both a hub port and a premier transshipment centre for direct ocean lines. In this section, you can consult the regular maritime lines, by geographic area, by cargo type and by the Port of Barcelona's company.

[Directory of the Port](#)
 The Port of Barcelona Logistics Community includes more than 15,000 people and 600 companies. Here you will find it organised by activity sectors: concessions, associations, official organisations, freight forwarders, custom agents, ship agents and service companies.

[SAU - Procedures](#)
 The Unified Access Service centralises the document and information exchanges between the Barcelona Port Authority and its clients and users. Here you may register documents, request permits and make payments. SAU is the APB's one-stop shop.

[Terminals](#)
[Cruises](#)
[Ferries](#)

[Press Room](#)

[Customer Service Dept](#)

[Annual report](#)

[Daily picture](#)

Conclusions

Starlab[®]

Tom Peters on Innovation

Tom Peters: Innovation is Actually Easy!



http://www.youtube.com/watch?v=8AGTpu_i8sc

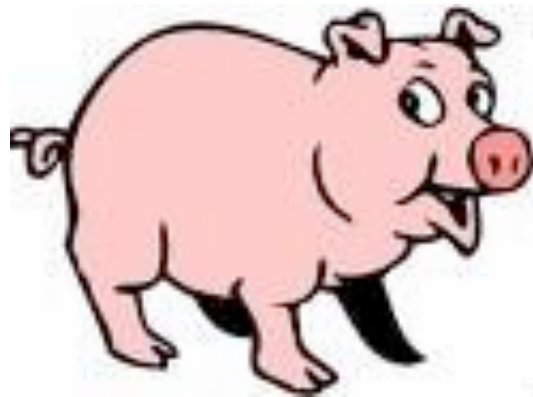
Hard work !

- *Genius is one per cent inspiration, ninety-nine per cent perspiration.* _
 - Thomas A. Edison (1847 - 1931),



Lessons learnt

- Technology capacity is really important to meet client's needs
 - Wonderful ideas lead to nowhere if not implemented correctly.
 - Other skills are needed in the team to turn Science into useful Applications



Thank you for your attention

For more information:

Ana Maiques@starlab.es

Starlab[®]