OAD Project

Business model for a high altitude pseudo-satellite manufacturer in Belgium

28/05/2015 — Josep Martí Suñer
Introduction to the HAPS Concept

**High Altitude Pseudo-Satellite**
- Unmanned Aerial Vehicle (UAV) - Drone
- Operates in the atmosphere
- Extended periods of time

**OPERATION**
- 24-hours day/night cycles
  - Daylight hours
    - Solar panels charging batteries
    - Engine working to keep altitude
  - Night-time
    - Batteries discharging to supply engine
    - Engine working to keep altitude
A quick look at the OAD Project

Technical Characteristics

- Operative all year but not winter season
- Working latitude between 0° and 49-52°
- Missions that require light payload (<10kg)

OADs Costs

- $265,000€

Telecom space satellite

- 310,000,000€

2016
- Demonstrator

2019
- Prototype

2021
- Production

2026
- 25% of the market
Many big fishes in a small sea

Titan Aerospace
- 2 models: Solara 50 & Solara 60
- Payload: 32-100 kg
- Fly endurance: 5 years

NASA
- 3 models: Pathfinder, Centurion & Helios
- Payload: up to 275 kg
- Fly endurance: < 1 week

Solar Impulse
- 1 model: Solar Impulse 1
- Aim: to promote alternative energy sources
- Fly endurance: < 1 week
Analysis of the offered VPs

Value Propositions

- Telecommunications signal stations
- Government environmental monitoring
- Government natural disaster monitoring
- Government borderline monitoring
- Global Positioning System navigation

Logic of the analysis

1. Mobile-cellular subscriptions per continent
   - Select the top 3 with the highest % increase

2. Active mobile-broadband subscriptions
   - Select the top region with the highest % increase

3. Absolute subscriptions – Subscriptions/100 inhab.
   - Select the top countries of the region
Dual Customer Relationships

OAD

Dedicated personal assistance:
• Close but professional relationships with clients
• Long periods of time, with a long term view

Co-Creation
• Short-term: Improvements thanks to customer feedback
• Long-term: Create aircrafts and technology to offer services current offer cannot fulfil

CUSTOMERS
Three main possible Revenue Streams

- **Transaction Revenues**
- **Recurring Revenues**
- **ASSET SALE**
- **AFTER SALES**
- **CUSTOMIZATION**
Resources are the key to success

**INTELLECTUAL**
- Build a strong brand
- Patent developed technology

**HUMAN**
- A leading-edge innovation team
- Technical and business skilled salesforce

**FINANCIAL**
- Lines of credit offered to clients through partnerships with banks

**PHYSICAL**
- An assembly line to ensure OAD aircraft’s quality
Activities should perfectly fit together

- Forefront design & technology
- Keep key phases & outsource others
- On-time delivery
Partnerships will optimize OAD’s offer

**CREATE**

- **Buyer-supplier relationships** to assure reliable suppliers
  - To optimize and reduce costs through economies of scale

**CONSIDER TO CREATE**

- **Strategic alliances between non-competitors** in order to acquire particular resources and activities
  - Looking to complement the offer with other companies’ VPs
  - Banks and financial services companies
Pricing strategy should be tailor-made

**Cost-based pricing**
Minimum price that you are willing to sell

- Break-even price
- Profit margin

\[ \text{Break-even price} + \text{Profit margin} = \text{Price} \]

According to strategy

- Fixed Costs
  - Machinery maintenance, infrastructure...
- Variable Costs
  - Raw material, direct labour, energy...

**Value-based pricing**
Maximum price that your client is willing to pay

- Cost-saving impact
- Efficiency impact

\[ \text{Cost-saving impact} + \text{Efficiency impact} = \text{Price} \]

- % of process efficiency increased thanks to OAD’s aircraft
- Money saved vs other available options in the market

**Our pricing approach**
Standardised prices but open to budget estimations for special projects

*First*, cost-based pricing to get a basic price

*Second*, value-based pricing analysed to see if the profit margin should be increased
Costs of HAPS vs. Space Satellites

Telecom space satellite

OAD’s HAPS

- Manufacture
- Launch
- Launch Insurance
- In-orbit Insurance
- Total

- $100K
- $22K
- $33K
- $110K
- $265K

$400M
$300M
$200M
$100M
$0M

$300K
$225K
$150K
$75K
$0K
Conclusion of the Business Model analysis

Value Propositions

- Telecommunications signal stations
- Government environmental monitoring
- Government natural disaster monitoring
- Government borderline monitoring
- Global Positioning System navigation

Channels

Customer Relationships

Revenue Streams

Key Resources

Key Activities

Key Partnerships

Pricing Strategy

Cost Structure
Q & A