How to Make, Grow and Sell a Semantic Web Start-up

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Reality: In the next 5 years many of you will create start-ups

- Learn from my mistakes
- Understand the role of Semantic Web technologies in a new business, and throughout its life
- Understand the specific position of a researcher in the business world
All successful start-ups are the same. All start-ups that fail, fail in their own way.
Success is getting what you want and failing at everything else.
There is no straight path

Sépage: Semantic Engine for Personalized Adapted Graph Exploration

Paris, France
I’ve got my first investment in 2012

• It was an informal meeting, one summer day in a Four Seasons hotel
• I had only a vague idea of what I was going to do
• I had no Business Plan
• I had no idea what would the domain of application of my technology be
• I was wearing shorts
I’ve got my first investment in 2012

- But I knew what my goal was: Create a Semantic Web technology asset, demonstrate its market relevance and sell it for a profit.
- I had credibility on the topic
- I knew how I would determine which domains are the best candidates
SEMANTIC WEB WAS THE KEY TO GETTING MY FIRST INVESTMENT
We started in early 2013

- We chose a domain: Travel. Because I believed Semantic Web would do great at supporting humans in making complex choices, and in use-cases where the “semantic” gap between the human perception and raw data is the greatest.
We started in early 2013

- We got into a prestigious start-up incubator
- Some of the people from my previous job followed me
- Some of my students joined as interns
- I was working from 9 am until midnight every day
IF YOU ARE TOO BUSY, THERE MUST BE SOMETHING THAT YOU ARE DOING WRONG
First clients appeared from day 1

• We had first clients from day 1, but not the clients we wanted to have. Yet we accepted.

• There was money, people were paid,

• We created a first prototype with public data: a system able to recommend future destinations with very little user history
Getting travel clients was difficult

• But we had no real travel-client data, we were not connected to any travel client API

• I was trying to get the travel clients to give me meetings, and convince them to work with us
One meeting was in Vert Galant, where people have pigs in their gardens, 8am, on a freezing winter morning.
We learned a bitter lesson about big corporations and start-ups

Here is how I explained to AirFrance how Semantic Web can help them get better at understanding clients needs, and doing personalization.
“Côté promotions, le graal serait d'envoyer des promotions personnalisées sur des destinations propices au surf à un client qui s'est précédemment rendu à Biarritz et à Tenerife.”

Tanguy Favennec
Digital Development Director Air France
"We need to rethink our strategy of hoping the Internet will just go away."
NOVICES
UNDERSTAND THE
IDEA OF SEMANTIC
WEB BETTER THEN
THEY
UNDERSTAND THE
INTERNET
Year 1: Conclusions

- We were almost profitable, but did not get any closer to our goal
- Our clients met our technology with:
  - Fear
  - Lack of resources to adopt it
  - Interest but no actual move towards adopting it
- We had no product
We knew our product had to be:

- Easy to understand and adopt
- Easy to integrate
- Require little effort from the client
In early 2014 we launched our product/service: GlobeAdvent.
In early 2014 we launched our product/service: GlobeAdvent
We won awards before having clients
Then the phone started to ring

• Journalists, Potential clients,… everybody called
• I was having 6 meetings a day (most of which completely useless)
• One of our investors had a heart surgery and we desperately needed money quickly
Focus helped deal with the pressure

• First client came: Nomade aventure, a respectable travel agency, with a great deal of online bookings, signed with us
• Friends helped find new investors
• We expanded our team
Semantic Web helped attract developers wanting to learn something new.
Few first months with the first client

CONVERSION

- +1.28% with GlobeAdvent*
- +28.1% for people who saw the recommendations**
- +106% for people who clicked on the recommendations***

*In comparison to the control group
**In comparison to the segment of people in the control group who would have seen the recommendations if they were there.
***In comparison to the website average

IMPACT

- 12% of users who converted have previously clicked on recommendations.
- 44.6% of users who converted have previously seen the recommendations.

Studies report that ~10% of Amazon sales can be attributed to the recommendation engine.

CLICK-THROUGH RATE

Your Website with GlobeAdvent

<table>
<thead>
<tr>
<th>CTR for recommendations seen</th>
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<tbody>
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<td>9.52%</td>
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This ratio is equal to the number of clicks divided by the number of recommendations seen by the users. When taking into account all the recommendations generated (seen or not) the CTR is 3.94%.

Industry Data

- 4.8% CTR of Google adWords in travel sector
  The adWords are always seen by the visitor, and Google is often used for travel inspiration in the beginning of the shopping process. [http://bit.ly/1cMIOG6](http://bit.ly/1cMIOG6)

- 5.7% CTR for On-site recommendations by Outbrain/nRelate
  General-purpose recommendation engines Outbrain and nRelate are proud of very high CTR registered on recommendations within client websites. [http://bit.ly/1qR6J2](http://bit.ly/1qR6J2)

- 0.5-0.7% CTR of Criteo retargeting ads in travel sector
  This click-through rate is also calculated based on recommendations generated (without tracking if they are seen by the user or not). [http://bit.ly/1vW9r63](http://bit.ly/1vW9r63)
Step One
Homepage

The user clicks on the offer “Birmanie”

What our system knows:

The user is interested in one offer: “Birmanie”
This offer is related to: Yangon (popular for Tea Salons, Markets, Asian Restaurants, Buddhist Temples), Shwedagon Pagoda (Landmark, related to Buddhist Religion)....
Step Two
Recommendation

GlobeAdvent recommends “Madagascar”, “Vietnam” and “Birmanie”

What our system knows:
By a client settings, the diversity of recommendations is reinforced, so the system proposes offers in different countries, but having similar content: Vietnam (similar by Buddhism, street markets...) and Madagascar (also in Indian Ocean, similar climate and activities...).
Step Three
2\(^{nd}\) click

The user clicks on the “Madagascar” suggestion.

What our system knows:

The user is now interested in two offers: “Birmanie” and “Madagascar”

This last offer is related to: Island, Indian Ocean, Wet climate... It also has common concepts (trekking) with the "Birmanie" offer.
Step Four

2nd recommendation

GlobeAdvent recommends “Costa Rica”, “Peru” and “Madagascar”

What our system knows:
The similarity of “Birmanie” (Myanmar) and “Madagascar” is not in Buddhism nor in National Parks (key features of the two offers).
The system bases the next recommendation on geographic features and activity-content “Sight-seeing”, proposing similar journeys on a similar distance from Paris.
International awards came in
Experimenting and pivoting

Reality Sets In
First Clients

First Awards

0 First Clients

Google Promotes Sépage to its 40 Biggest Clients

However...
Year 2: Conclusions

• We had investments, awards and notoriety
• But the commercialization was slow and cost a lot
• The clients required a lot of coaching and consulting, there was a lot of proving that it works, which is costly in man-effort
• The product was too cheap
Your product allows to do something that couldn’t be done before.

It’s expensive.

vs.

Your product allows to do something in a cheaper more efficient way.

It’s cheap.
Then came Havas Voyages

- They wanted our technology in their new product
- They were desperate to innovate, and be leaders of tomorrow's economy
- They offered their terms. The value of the contract was like 50 average clients combined (and the sale was quicker). It made us think.
Havas Voyages wanted an intelligent assistant
We changed our commercial offer

• We offered clients to construct applications, websites, CRMs on top of our technology platform in a similar way that Havas Voyages wanted.

• It was all against our initial intuition that cost should be light, integration easy and effortless.

• Tighter integration meant more dependency on our company.
Make Travel Great Again

TO CREATE INTELLIGENT AND PERSONALISED SOLUTIONS FOR TRAVEL

CUSTOM
INTERFACES

READY TO USE
ALGORITHMS

PERSONALISATION
CROSS-SELLING
SEARCH
ADVERTISING

TRAVEL TECHNOLOGY
CORE
It worked

• The commercial process was still long, but in the end the contracts were bigger
• Havas Voyages gave us a major Website contract for the same platform
• We had more, better, bigger leads
There is only one viable start-up ideology: common sense.
Year 3: Conclusions

- By listening to the market we changed our commercial offer
- We started to get large contracts
- We’ve got a first acquisition offer
Acquisition was the goal from the start

- We were always looking to flirt with potential buyers
- When the first real intention appeared (in summer of 2016) we hired an M&A firm to represent us and find other buyers
- Most intentions shown were not really honest
A lot of time lost

- Many discussions on senior levels lead to no real intentions. People in big companies often like a free lunch, and are willing to fly long-distance to get it.
- Yet, every buyer that would show up, regardless of how serious their interest would be, would attract new candidate buyers.
- We had hundreds of M&A meetings with 5 serious buyers, and dozens of non-serious big ones.
Different types of buyers

- Types of companies
  - Companies that might be your clients
  - Competitors or so
  - Companies wishing to enter a new market
- Types of people in those companies
  - Innovation Directors or Department Directors
  - Founders
  - M&A Directors (external Growth)
The buyer that finally bought us

• Was a company offering software services to the same clients we did
• Main interest was to enlarge their offer with new technology and get rid of their reputation of being a “legacy technology provider”
• Commercial synergy was the highest, they bought a clear market potential, rather then pure technology
• Semantic Web technology was clearly a differentiating factor in the buyer's choice
Negotiating the deal took 7 months

• From the first meeting when acquisition was discussed to the actual signing

• If there was one book you should read it would be: The Art of the Deal by Donald Trump

• Lawyers, auditors, accountants... are slow and slower than you think

• Some people left the company the day after the news were announced.
You should be able to walk out

- We created our company in order to sell it for its technology, so we did not really have a choice, and the buyers knew it.

- If you can, create a company that can both stand alone or be sold (it is difficult thought as the funding required is different, and the more you are funded the more difficult it is to sell).

- Construct your leverage by having multiple buyers, and steady revenue or subsidies.
Takeaways

-Semantic Web-
There is huge potential for Semantic Web in the Travel Industry:
- Data Exchange
- Annotation (currently done by humans)
- Inference
Semantic Web is a great differentiation factor, allowing to stand-out in the eyes of clients and talent, but not enough.
Semantic Web can be easily understood by people in the industry.
Takeaways
-Funding-
The destiny of your start-up depends on the type (and amount) of funding.
Funding

• VC vs. Private Equity: make the adequate choice

• Take the bank loans, but give no personal guarantee. Large successful companies have loans of ~ 100% of their revenue. Debt is the cheapest capital.

• Always raise more money then what you actually need
Takeaways
-being a researcher in business-
The business culture is very different from the research world culture.
Do not meet with everyone who wants to meet you. Ask yourself why should you meet them?
Your knowledge might intimidate people, give the impression that you have the upper hand.
Interactions with people take a bigger part of my day. There is also administrative work.
Making your company independent from you might be counterintuitive but is an absolute necessity
Applying the research mindset to business problems might lead you to overthinking. Business is often more banal.
Research is about proving you're right.

Business is about shifting the world to your advantage.
Business Essentials: People, Customers, and Product are important, but must be replacable.
Questions?

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