



Contribution to worldwide food security

How to feed a growing population despite climate change?



Good morning to all of you.

My name is Felix Bogliolo. I'm the Founder and CEO of Via Marina.

I'm an engineer by Ecole Polytechnique of Paris and I also hold a PhD in Economics.

The mission of Via Marina is to ensure worldwide food security in the face of two adverse megatrends: population growth and climate change.

My presentation will prove that Via Marina offers the best impact ratio: solving the world's problems related to investment amount.

Largest market for water

- 💧 Approx. 80% of world water demand: agriculture
- 💧 Growing agricultural demand – population growth :
 - 💧 +2,5BN hab. around 2050
 - 💧 Higher standard of living: food with higher water footprint
- 💧 Declining agricultural offer – climate change:
 - 💧 Reduction of cultivated areas
 - 💧 Drop in yields
- 💧 Food insecurity: social unrest
- ⇒ Irrigation supplementary : required 40Mha and 9500m³/s water

UN World Water Development Report 2006 – Chapter 7 – P.252

Very little is done about the largest market for water: agriculture and its most crucial issue: bulk water provision.

On the first hand, we are about to face an important increase in demand for food by the 2.5 billion supplementary human beings upcoming before 2050.

On the second hand, we are already faced with the disastrous consequences of Climate Change: We see large decreases of agricultural surfaces in many regions and for many crops. And, it is not of much comfort for the concerned farmers to know that there is now newly available land in Siberia.

The consequence of these two megatrends is food insecurity which generates social unrest.

That's why all experts coincide that we require about 40 million hectares of supplementary irrigated land in surfaces today unproductive. Which will require an increased water provision over nine thousand cubic meters per second.

Existing water provision techniques

Desalination :

- ◆ Limited flows: $2\text{m}^3/\text{s}$
- ◆ High energy consumption: $4\text{kWh}/\text{m}^3$
- ◆ Price not affordable by agriculture: $\approx 1\text{USD}/\text{m}^3$

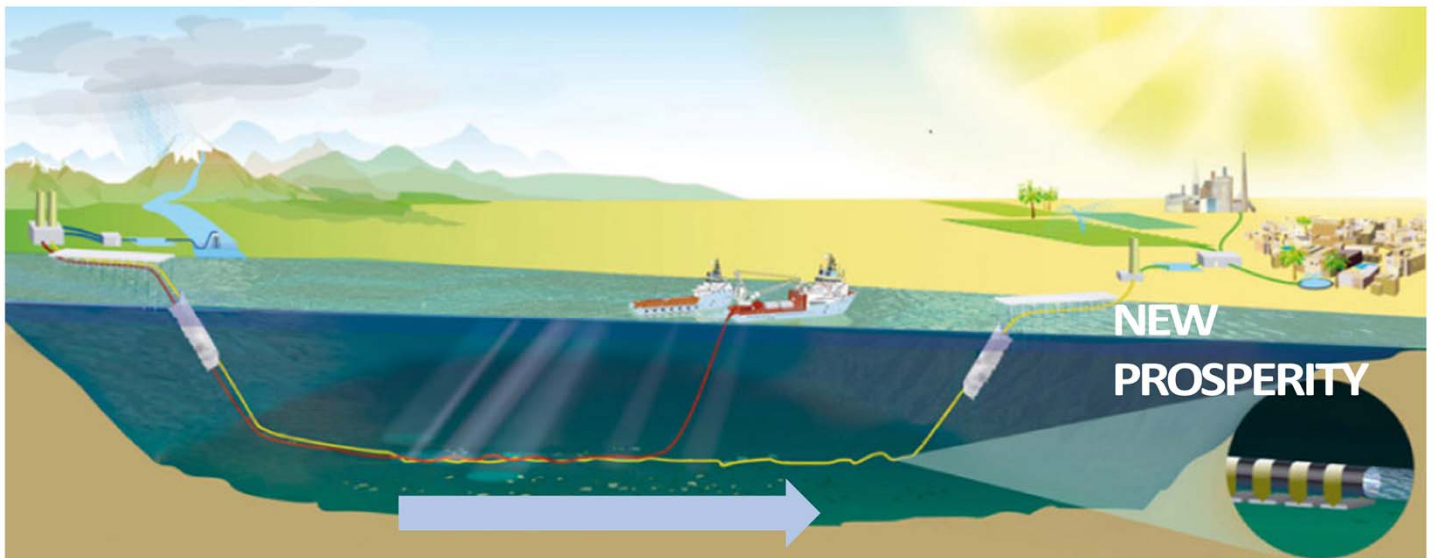
Onshore transfers:

- ◆ Politically and environmentally difficult as intake is upstream

But, existing water provision techniques are of no help to attain this objective. Desalination produces limited flows that are not commensurate with agricultural requirements. It is very much energy consuming. And its cost is way above what even the most profitable crops can afford. That's why basically nowhere, desalination is used for agriculture.

Traditional onshore transfers suffer from the same cost impediment. And also, they cause many environmental disasters downstream their catchment point. That's why no major onshore transfer has been implemented over the past decades in any country environment conscious.

Via Marina: THE solution



Important flows – Low energy consumption – Affordable price

Via Marina is THE solution to this agricultural problem.

For this, we develop our proprietary system for transporting water in large quantities and over long distances by an underwater flexible pipe. We transport water taken at the mouth of a river or from the outfalls of wastewater treatment plants of large coastal cities.

We can transport the equivalent of one dozen desalination plants in one 4 meter diameter pipe over several hundreds of kilometers, using up 5 to 10 times less energy and for a cost 50 to 70% smaller: i.e. AFFORDABLE BY AGRICULTURE!

Disruptive innovation, albeit down-to-earth

- 💧 Lessons learnt from existing techniques
- 💧 Several patents (pipe and system) constitute barriers to entry.
- 💧 Technical and financial characteristics of our proprietary pipe → competitiveness of our system

Our system is really disruptive although apparently simple.

Indeed, all the elements of our system and of our pipe exist already but in smaller dimensions and for other purposes. For example, there have been thousands of kilometers of offshore oil and gas pipelines for many decades. Our innovation consists in combining many existing elements and in enlarging their dimensions. Several patents protect our innovations, among other barriers to entry, ensuring our leadership. Our strong competitiveness derives mainly from the unique technical and financial characteristics of our proprietary pipe.

Solving water supply to agriculture

- No longer free water gently offered by nature
→ a new business model or paradigm
- New infrastructure
⇒ New utility : construction, operation, meter, invoice, collection
- Public Private Partnership – P3
+ Possible involvement of a Sponsor :
 Venture Philanthropy or Impact Capital
+ Full support of beneficiaries: farmers and agribusiness

Water supply for agriculture will be solved in a manner similar to what occurred with the introduction of many different kinds of utilities: a change of business model.

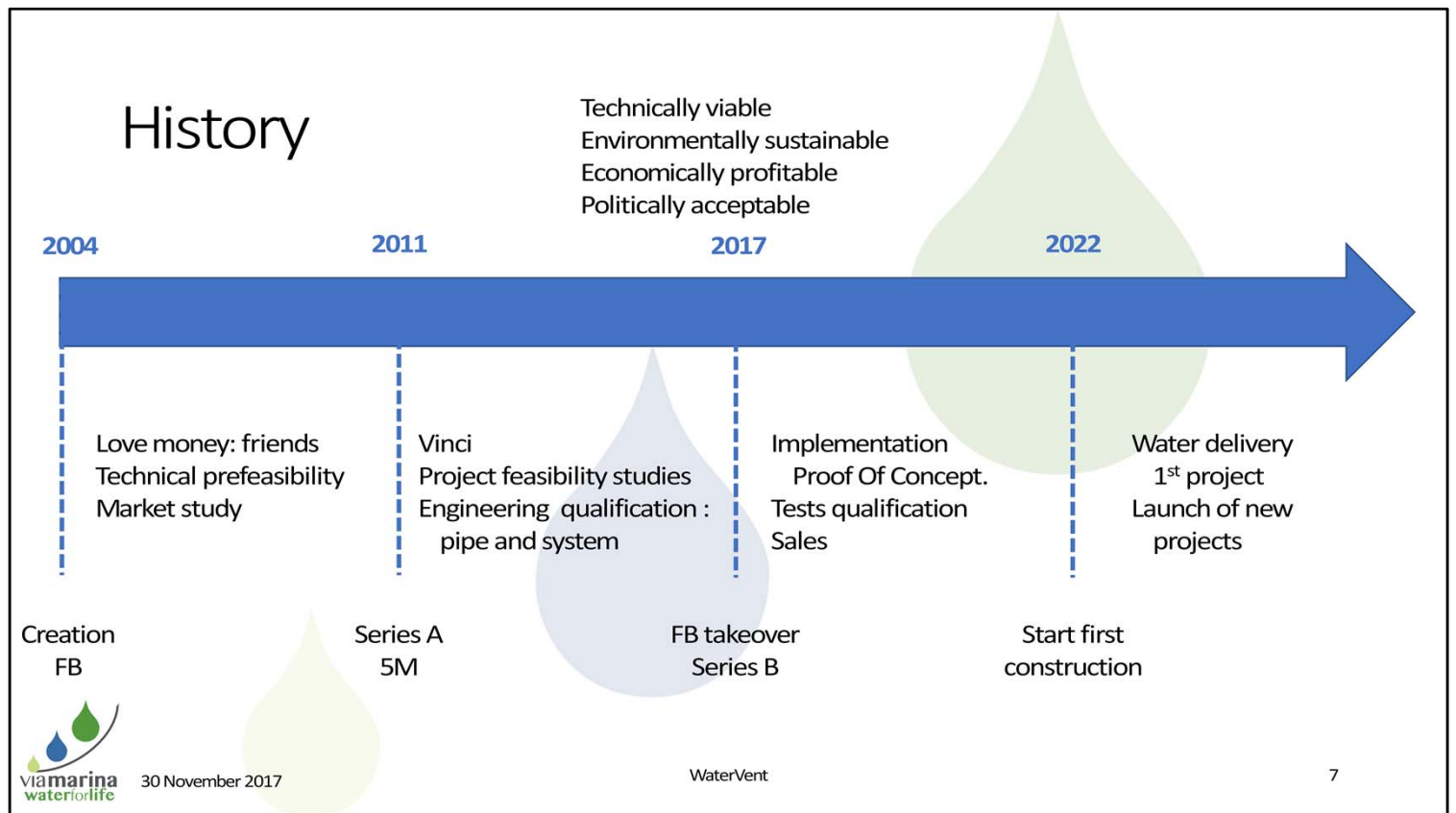
We'll have to pay for the service of having water brought to new fields in order to grow imperiously needed supplementary crops.

Some new kind of utility will build and operate those new infrastructures. It will put a meter at the entrance of these new fields. It will charge for the supplementary water consumed. If we don't pay, we'll be subject to some kind of legal punishment.

This will be implemented in the framework of some kind of Public Private Partnership. With two add-ons:

First, the potential involvement of a Sponsor as our mission, albeit for profit, brings many important social benefits. We could categorize it as Venture Philanthropy or Impact Capital.

And second, the full support of the beneficiaries: farmers and agribusiness, through initiatives such as cooperatives.



I created Via Marina at the beginning of this century based on my original ideas about our proprietary system and pipe.

Then I continued with a few friends by implementing preliminary technical and commercial studies. Together, and all of us part-time, we developed a Version 0 if you will.

Then we raised a 5M Series A funding from the Vinci Group. That way we reached the current Version 1.

During these years, our technical and commercial studies have confirmed that our projects are at the same time technically viable, environmentally sustainable, economically profitable and politically acceptable. These studies have also shown that it is necessary to continue investing both technically and commercially, a few dozens of millions.

The implementation of such hydraulic infrastructures mainly for agricultural uses does not form part of the strategy of the Vinci Group. Hence I bought back their stake, thus allowing me to be at the necessary liberty for finding new investors able to ensure the success of Via Marina.

In this context, we're launching now our Series B fund search so that we can continue our development and construct safely in a few years' time a first project. Other projects will follow soon after the first one starts delivering water.

Series B

25M

- Technical : 15M for P.O.C. and qualifications
- Commercial : 10M for sales support and participations in SPV projects

Equity

Majority

Our Series B is for 25M.

15M will be used for the Proof-of-Concept test and the qualification of both the pipe and the system. It is probable that this will induce an improved Version 2 of our system and pipe.

10M will be devoted to supporting the sales effort and more importantly to taking equity stakes in the SPVs developing our projects.

These funds are required as equity.

Investors will obtain a majority participation.

Profitable impact investment opportunity

- 💧 IRR >15% projection horizon = 10 years
- 💧 Cash positive 5 years
- 💧 I.E. acceptable risk-reward relationship with current low interest rates
- 💧 Generation of socioeconomic development by fostering irrigated agriculture
- 💧 Ensuring food security = contribution to solving world's problems
- 💧 Investors:
 - 💧 Dynamic albeit patient,
 - 💧 Mindful of these big global stakes
 - 💧 Sharing our vision



30 November 2017

WaterVent

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Via Marina is a profitable investment opportunity, beyond its appealing qualitative characteristics.


Our action plan yields an Internal Rate of Return greater than 15% over a 10 year horizon. We'll be cash positive in 5 years thanks to the construction of a first project. Our projects will generate socioeconomic development by fostering irrigated agriculture. Also, by ensuring food security, they will contribute to solving political and social crises, undesirable migratory flows, extremism, among many other world's problems. We are looking for dynamic, albeit patient, investors, mindful of these big global stakes and **above all** sharing our vision.

To conclude, I trust that I have sufficiently proven my earlier affirmation: Via Marina offers the best impact ratio, solving the world's problems related to investment amount.

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While you're watching,
this river has poured into the
ocean much more water than
required to feed over
one million humans



Stop watching ... Act with



Thank you very much for your constructive attention.

Now question time.