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BIRTH OF A CITY? SOPHIA ANTIPOLIS

The idea

I am often asked how the idea of founding Sophia Antipolis came about. A difficult question! Ideas take form and mature slowly. Was it a professor of literature at the Lycée of Nice who impressed me as a young student, by recounting how Romulus and Remus traced the boundaries of their new city? Even before then, at the primary school of Saint-Paul, Célestin Freinet infused a constructive enthusiasm in his pupils by linking the knowledge he instilled to their future action. Later, creativity always struck me as being associated with the easy contacts in the Latin Quarter, a privileged place where, since the days of François Villon, students and artisans, burghers and intellectuals have enjoyed meeting, drinking and talking in taverns: *Café Procope*, *Brasserie Balzar*, bistros and bookstores, *Collège de France*, *Sorbonne* and austere *Grandes Écoles*, the neighbourhoods of Boulevard Saint-Michel, Montparnasse, Saint-Germain-des-Prés. Such a great source of energy, vitality and creativity!

Alas! the modern megalopolis, with its congestion and overlong transportation seriously hinders convivial creativity.

So why not a Latin Quarter in the countryside? At present, for universities, schools, research centres and high-technology industry, state-of-the-art services, the city centre is often inappropriate because of glut, taking up too much time and energy, a source of stress rather than friendly relaxed creativity.

This idea, launched in an article in the daily paper *Le Monde* in August 1960 under the title *Un Quartier latin aux champs* (A Latin Quarter in the countryside) went unnoticed. There, among other things I denounced the lack of sociological consideration of the matter of land development, leading to a dispersion of fragile *substantia grisea*, that requires a favourable cultural environment, a specific microclimate that almost always implies intellectual contacts and exchanges to maintain its creativity.

So there had to be a Latin Quarter in the countryside, a city afield devoted to creation, intelligence, and consequently to economic, cultural and social modernity.

I spoke of this project to my father-in-law Émile Hugues, senator of the Alpes-Maritimes and President of an association named *Expansam*. He approved. For political reasons, as well as health problems, he was not able to play his role as a regional leader to overcome the natural tendency of people and things not to encourage overly daring innovative and risky endeavours. The General Council did undertake some studies, particularly when, as manager of the Bureau of Geological and Mining Research (BRGM) that was seeking to decentralize, I led a technical visit to the French Riviera. Francis Palmero, President of the General Council at the time, received us, but the dossier did not materialize as a specific project. The BRGM set up in Orléans-La Source, another tangible result, which gave rise to Orléans-Technopole.

In 1964, I changed my profession to devote myself to what struck me as determinant for the coming years: education. At the *École des Mines* in Paris, with the Director Raymond Fischesser, I began to implement a key idea I have always held: connecting education, research and effective use of the fruits of such research. Simultaneously developing Education, Research and Technology Transfer. Connecting skills to financial and market matters. This was a necessary ambition. So I created the instrument, *Armines*, an association that celebrated its twentieth anniversary in 1987 with the motto, *Lier le savoir au savoir-faire* (Connecting knowledge and know-how).

1965 saw the preparation of the *École des Mines* budget and four-year program for the Fifth Master Plan. I drew up a project, which was revolutionary for a *Grande École* in Paris: decentralizing some research laboratories to the north of Antibes, in a Science Zone to be created. Some professors and administrative

executives saw there the sign of emulation of Ferdinand Lop, a political eccentric well known in the Latin Quarter, who wanted to prolong Boulevard Saint-Michel all the way to the sea...

I met Michel Bavastro, a friend of my father-in-law's and owner of the daily paper *Nice-Matin*. He promised me his help (a promise kept for over twenty years now). In 1965, in *Nice-Matin*, I mentioned the interest for the region to develop research activities, echoing what had been initiated by Aerospatiale in Cannes, Thomson-CSF in Cagnes-sur-Mer, IBM in La Gaude.

The idea of an intellectual hub outside the major cities offered a convergence with Thomas More's Utopia, Saint-Simonian projects and the aphorism of the humorist Alphonse Allais: "Cities should be built in the countryside." But there were no known precedents. Silicon Valley did not exist: the San José valley was still the Californian prune capital. It was known, however, that, between San José and San Francisco, the park Stanford University rented to industrialists attracted by the reservoir of skills nearby was setting up a new creative synergy at the Stanford Research Park in Palo Alto. This demonstrated, in particular in the rapid progress of Hewlett Packard, that the alliance between Knowledge and Industry was profitable. Similarly, in the Eastern US, Route 128 was developing near the universities in Boston.

The phenomenon appeared in the US, but was limited to the proximity of universities and the existence of major army research contracts.

As for *Akademgorod*, the Siberian reference in an autocratic country was not likely to inspire much enthusiasm.

In Europe, there was nothing. Except in the Alpes-Maritimes where, with some lag, pursuing personal contacts helped the idea ripen little by little thanks perhaps to the Côte d'Azur's international vocation, enabling innovations to flourish here.

But it should be remembered that, at the time, what interested developers and politicians was heavy industry. This was the time of the launch of Fos and Dunkerque; Le Bec d'Ambès and petrochemicals were developing south of Lyons. Only a few initiators here knew of General Doriot, a Frenchman who became an American General and, in the fifties, created Venture Capital and funded the birth of Digital Equipment, a small firm created by a researcher at MIT. Today Digital Equipment, no 2 in computers, is creating thousands of jobs while Dunkerque is laying off staff...

Then came 1968 with its fanciful, idealistic, unrealistic cultural revolution. And slogans: demanding the impossible, changing life, imagination in power. Aspects harking back to the Revolution of 1848 and its radical questioning of things.

In spite of its inevitable and predictable failure, the movement of 1968 certainly broke down a certain number of cultural barriers and facilitated the adoption of innovative ideas. In my opinion, 1968 was of great help in realizing the utopian "Latin Quarter in the countryside".

Thus, in late 1968, at a luncheon with two of the most powerful senior civil servants of the time, Jérôme Monod, Managing Director at DATAR, and Claude Daunesse, Director of the *École des Mines*, I evoked the problem of the *Grandes Écoles* that Jérôme Monod wanted to oust from Paris. As secretary general of the very recently founded *Conférence des Grandes Écoles* I had created in the wake of the events of May 1968, I suggested a "layering" formula: the *École des Mines* would develop an intellectual centre near Antibes; other schools would help in the development of Rennes and Toulouse.

"Banco", said Jérôme Monod. This was probably the real birth of what had to be given a name to make it live beyond a season or a lustrum.

Sophia Antipolis from *Sophia* - wisdom in Greek (and my first wife's given name) - and *Antipolis* - the ancient Greek name of Antibes (and the notion of bucolic creativity outside the city). Although criticized at first, it charmed the media and users, and was soon a protected collective brand name.

Selling Utopia

This was the beginning of the second phase, with of course the pursuit of the first: selling the idea.

A major step was Jérôme Monod's agreement to support Sophia Antipolis, the project of creating an "International city of wisdom, science and technology on the French Riviera" in the *garrigue*.

From there, it was necessary to develop a strategy to bring to fruition this dream, this Utopia, and "sell" it.

A luncheon at Le Mas des Serres in Saint-Paul with senior staff from the Chamber of Commerce of the Alpes-Maritimes reinforced the faultless cohesion and support of the main economic opinion leaders in the Alpes-Maritimes at the time: Gérald Cassin, José Bona, Henri Viterbo, Jean-Jacques Robert, successive Chamber of Commerce Presidents.

A sensationalist article in *Nice-Matin* in 1969 by Jean-Claude Verots, "Sophia Antipolis, the city of 20,000 researchers, will arise by 1980 on the plateau of Valbonne," caused me to become the brunt of unpleasant remarks from Paris. You don't have to be from Marseilles to make gross exaggerations! We thought you more serious!

I founded *Association Sophia Antipolis*; the Board of Directors was made up of René Dars, Dean of the Science Division of the University of Nice, Jean Ossard, Director of *Armines*, Roland Somon, Director of the Industrialization Bureau of the Alpes-Maritimes, Maurice Papo, in charge of IBM in La Gaude, François Bus,

in charge of Texas Instruments in Villeneuve-Loubet. By common accord, only industrialists, friends, teachers, researchers were associated. The only local elected officials of the Association would be the President of the General Council and the Mayor of Valbonne, the commune on which the project started. This helped avoid the project being considered political (particularly since, at the time, although the President of the General Council, Francis Palmero, was right-wing, the Mayor of Valbonne was from the left).

The birth certificate was sealed in an office of the Prefecture of Nice. In 1969 this was a useful precaution: decentralization did not yet exist and the Prefect jealously guarded realizations. But the Prefect, Mr Thomas, could not remain indifferent to an article in *Nice-Matin* entitled "With 20,000 jobs".

Lobbying began in Paris with its ups and downs.

Downs

Reservations from the President of *Gaz de France*: when I go South, I want to relax; building a major innovation centre is too daunting a venture.

From Roger Martin, President of Saint-Gobain at Pont-à-Mousson: research centres should be located near production units and those of Pont-à-Mousson and Saint-Gobain are in Lorraine and the North.

Pierre Jouven: research investments for Péchiney are already localized; too bad.

Bernard de Villemejeane, President of IMETAL, in the Rothschild Group: we believe Trappes to be more favourable since it is near the headquarters, but the idea is a good one.

Ups

Claude Daunesse, *École des Mines* Director, supported the idea and discussed it positively with all those he spoke to.

André Giraud, cabinet Director for the future minister Guichard: there is no reason not to promote the South; one of the IFP research centres there is very successful; I will certainly do my best to help.

Hubert Curien, then Managing Director of the CNRS (National Scientific Research Centre): a very good idea. The CNRS will help.

Jacques, Lesourne, President of SEMA: I'm game, as soon as the SEMA has the ability to act.

François Dalle, President of L'Oréal: If DATAR prevents us from developing in the Parisian area, I find the idea interesting and I'm game.

The President of Chase Manhattan, to whom I presented the project in New York: an excellent suggestion, I think it's well worth the effort.

General Doriot, in Boston, the previously mentioned inventor of capital risk, gave me advice and suggestions, while issuing a warning since he viewed the operation as quite risky.

Ronald Rumsfeld, former US Defense Minister and President of Searle, whom I visited in Skokie, Illinois: why not? It seems positive.

François Block-Lainé and Jean Saint-Geours, President and Director of the Crédit Lyonnais Bank: So far, you've succeeded in your undertakings, particularly in developing the *École des Mines* and *Armines*. Your concept is daring, but we will take the risk and open a line of credit and without mortgage, since we trust you personally.

A co-worker, Jean Ossard, Director of the *Armines* Association created to facilitate technological transfer of skills from the *École des Mines* to industrial environments, participated in lobbying by talking about it to *Armines*'s many customers. Other converts did likewise, Jean-Jacques Robert and Francis Palmero in particular.

Obviously, the camaraderie of the *Corps des Mines* also played in my favour and helped the project.

Thanks to these initial contacts and a network of friends, I created a non-profit economic interest grouping with ANVAR, a public subsidiary of the CNRS directed by Mr Berard, *Armines*, *Association Sophia Antipolis* (recently founded) and the Industrialization Bureau of the Alpes-Maritimes, chaired by Gerald Cassin and whose Director Roland Somon was also on the Board of Directors of *Association Sophia Antipolis*.

I went to see André Bettencourt, then Minister in charge of Territorial Planning and Development. André Bettencourt and his Cabinet Director Roger Ginocchio, a *Polytechnicien* from the *Corps des Ponts et Chaussées* were convinced. A tour by helicopter of the site I had selected with the Prefect of the Alpes-Maritimes and the Minister's cabinet director gave rise to another article in *Nice-Matin*, an indefatigable defender of the project. Public opinion in the *département* continued its positive support.

The Association's first AGM was held in the Negresco Hotel opened to us by Paul Augier. Émile Roche, President of the Economic and Social Council, had sent a telegram of support. We had invited all the national elected officials. After the talks there were questions, comments, good wishes. Virgile Barel, Communist Member and Dean of Parliament, present at this meeting, told me of his misgivings: he feared it might all lead to real estate speculation.

With respect to the central authority, we were warned: no funding could be expected. The technostucture managing industrial and research policy didn't take to overly new ideas. We did, however, have moral support from DATAR.

The Public Works Minister, thanks to Jacques Tansi, Personnel Director and a native son of Nice, provided an engineer from the *Ponts et Chaussées*, Jean Raoux, to define the infrastructures in partnership with the architect Jacques Charon, who agreed not to charge us for his work in designing the operation.

It was up to us to show the way. Up to us to show that it was possible to have an alliance between a pool of skills and a financial pool. That it was a prelude to the 21st century. Up to us to explain why the experiment was being tried on the shores of the Mediterranean.

Of course, the essential reason was not tied to the massive presence of technical skills. Nice, 5th largest city in France, still had only the embryo of a university. Since it was not listed as a *métropole d'équilibre*, it was forgotten in the distribution of major investments by the State in the area of research and higher education. There was no major industrial or technological tradition in a region considered to be purely dedicated to tourism.

The essential reason, besides the fact this is my native land, is cultural in nature. This is clear from the text below, an excerpt from a brochure I published in 1972.

Why the French Riviera?

The dynamics of economic progress no longer depend only on heavy industry and raw materials, coal and ore. It depends on *substantia grisea*, quality education, quality environment. This is a considerable change.

For all of us, coal and heavy industry are associated with the 19th century, with the smoke and fog of Pittsburgh Pennsylvania, Birmingham England, Lorraine France, Ruhr Germany. This was Western Europe, geologists's Hercynian domain, with outcrops of carboniferous strata.

Quality of the environment, attractive sites, joy of living are associated in our minds with the Mediterranean shores, this cradle of Western Civilization with its plains, cities, hills on a human scale, whether in Attica, Latium, Tuscany or Provence. Geologists tell us this is an effect of Alpine orogeny, an effect also present in California, that other region so attractive to innovators.

This development of modern Society is the first factor that made us choose the French Riviera for our International Science Park, Sophia Antipolis, the City of Wisdom north of Antibes, the former Antipolis across from Nice.

We were guided by a second major reason: the proximity (fifteen minutes by car) from an international airport directly linked to the main cities of Europe and the world, an airport that is accessible every day of the year, with infrastructures growing according to needs, with no delays, which is quite rare!

The third reason is the long international tradition of the French and Italian Rivièras. A welcoming region, known to everyone.

The fourth reason is more specific in nature. It may be considered as both a favourable factor and a handicap. In the heart of the plateau of Biot, Valbonne, Vallauris, Antibes, a vast unbuilt area of nearly 10,000 hectares - the area selected for building Sophia - can accommodate overall development and innovative scientific urban planning on a scale with the plateau.

Sophia Antipolis, a city devoted to creation, designed for its promotion, built up from nothing in a pristine site where nature retains all its rights, will be organized around a heart, the ancient Agora transposed to a Provençal village square. In the shade of the plane trees, ideas will be exchanged, businesses and jobs will be created, there will be attempts to imagine and implement progress in all its facets.

The growing importance of innovation and research characterizes the end of the 20th century. Grouped in specialized areas, Science and Technology Parks - like *Akademgorod* - areas surrounding great university campuses - like Stanford, Berkeley or Saclay - or the region of Grenoble, show that ours is not an isolated approach. Whatever their type, these groupings share a certain number of characteristics: pluridisciplinarity, easy contacts and meetings, the scientists' implication in their localization.

Our international City of Wisdom, Science and Technology results from all these ideas.

We also hope to see the plateau attract the nerve centres of major companies, or at least their headquarters. This seems essential for Sophia Antipolis to avoid being lost far from the pulse of the world, like *Akademgorod*, for instance. Finally, we would like Sophia Antipolis not to lose track of the truly Mediterranean Wisdom (indicated in its Greek name), Humanism and Measure in the stringent constraints of modern technology. This is basic to our project, although it may be difficult to implement.

Beyond a certain pleasantness, a certain art of living everyone can sense, we feel greater scientific creativity will ensue from this combination. Indeed, the approaches to creation, whether artistic, literary or scientific, are for the most part identical.

Visible aspects

I organized a non-profit economic interest grouping with no capital, named *Sophia Antipolis Valorization*, with ANVAR, the Industrialization Bureau of the Alpes-Maritimes, *Armines* and *Association Sophia Antipolis*. Its purpose was to:

- attract organizations to this “intellectual desert” in the *garrigue* to the north of Antibes;
- purchase land;
- start up “equipment works”.

The administrative procedures for ZACs (Mixed Development Zones) left Savalor, the beneficiary operator, with all the financial risks. The non-profit Savalor grouping had no capital. It had to convince bankers to take risks. The Crédit Lyonnais bank, directed by Jean Saint-Geours and chaired by François Bloch-Lainé, agreed to be convinced. They opened a bank overdraft without taking any mortgage guarantees.

The works began even before signature of the first ZAC convention by the *département* - though the administrative departments were diligent. André Bettencourt inaugurated them in 1971.

To attract organizations, we were assured of the support of the Delegation for Territorial Development and its dynamic Director, Jérôme Monod. But this key asset did meet with considerable scepticism. Creating scientific and technical activity in the land of Carnival and seaside resorts! Perish the thought! We thought Laffitte more serious, we often heard, accompanied by a smirk.

So there was scepticism. But it was not general. My friend Claude Daunesse, Director of the *École des Mines*, had made a commitment: in March 1970 he wrote - the first official deed - to the Prefect of the Alpes-Maritimes to reserve 10 hectares of land on the possible future scientific activity zone to be created to the north of Antibes, on behalf of the Minister of Industry. My friend Hubert Curien, then head of the CNES, kept his promise to set up research centres for the CNRS. François Dall, then CEO of L'Oréal, a firm with factories in over 18 countries on all continents, was the first to purchase land. A team from the IFP (French Petroleum Institute), which had research centres the world over, and Franlab, an IFP subsidiary, were the first to build on the site, along with the French Seismic Protection Company, a subsidiary of an American group, directed by a *Polytechnicien*, who is also a friend of mine familiar with Stanford and the notion of a Science Park.

Thanks to the perseverance of Jean-Jacques Robert, the Business School of Nice left its premises on Boulevard Carabacel, grown too small. Renamed CERAM, it is now a major education and research centre with advances confirmed each year.

And what of research directors of Greek origin? Seeing the name Sophia Antipolis when they land at the Riviera International Airport in Nice, they seek to learn more about this city with its Hellenic name and visit the project: this was the case for Mr Kalopissis (L'Oréal) as well as Mr Vassiliou (Rohm & Hass Europe) who, thanks to this “contact”, left Zurich to settle in Sophia Antipolis.

And what of the response of the bishopric of Nice? It immediately agreed to invest on the site to create a spiritual centre.

But not every undertaking met with success. With the first oil crisis in 1974, Rank Xerox cancelled its projects although work had already begun, Technip shifted to Nantes, Burroughs, beckoned to Bordeaux while setting its sights on Sophia, left France altogether.

And there was the failure of long negotiations with Hirschhorn, an American patron of the Arts who owned several hectares of land in the ZAC he was ready to donate to create a Museum in his name. In exchange, he wished to have lunch with French President Pompidou, be awarded the Légion d'Honneur on the contingent of the President of France and have access to a villa on the site of the Foundation. Three conditions that were accepted within three days. Alas! great American patrons are surrounded by a gang of lawyers with contradictory opinions. It was necessary to resort to expropriation. As a result the Hirschhorn Museum was built in Washington DC.

The persons in charge of Sophia and Savalor on the site - first Paul Gatineau, then General Belaso - devoted their time ceaselessly to their complex and exalting task.

Structures involving local communities

The growth of Sophia very soon led to extending, next to the initial operation, a structure more in keeping with the tradition of land development: a semi-public union of communes, *département*, Chamber of Commerce and Agriculture, Symival, chaired by Francis Palmero.

The coexistence of two structures - Savalor, an EIG, and the semi-public Symival - led, of course, to competition, though theoretically amicable. The Chamber of Commerce received a mission of delegate prime contractor and set up a delegation to organize the extensions, residential areas and marketing in particular. All of this continues.

Developing activities - Creating the Sophilopolitan spirit

This phase was pursued and developed as the next phase began. As soon as a certain number of businesses had settled on the site, another essential question was posed. How can a new community be made viable? How can it acquire a soul, a life in itself? How can the site be managed to be more than an empty shell, a mere industrial zone or juxtaposition of institutions in one place?

From the very start, the Board of Directors of *Association Sophia Antipolis* considered it essential to create a new frame of mind, a new form of conviviality. Officially entrusted by Symival and Savalor with instituting cultural and scientific activities, we wanted to bring people together to meet, organize cross-fertilization, while preparing the creation of a public Foundation to follow up this activity.

Exhibitions, lectures, concerts, theatre, music, ballet, meetings, clubs, a wide range of activities through associations are developing in the Park. Those in charge are highly motivated. My first wife, Sophie Laffitte, founded a Cultural Activities Committee. My Assistant, Dominique Fache, launched a festival which, for over ten years, has brought together great names in dance, theatre, cinema, music.

It was necessary that this "City of Scholars", peopled with scientists, engineers and technicians, not be cut off from the surrounding environment. This gave rise to intense contacts. For over a decade, tens of thousands of people have visited the site, thanks to the devotion and guidance of eminent academics, on a volunteer basis of course.

The Foundation and *Association Sophia Antipolis*, directed by Michel Lafon, has developed many Clubs, initiating young students to computers and helping such associations as *Villes-Accueils*.

Moreover, with the support of *Association Innovation Service* and Roselyne Koskas' boundless energy, there has been a major reflection on the new alliance of finance and creativity. The Revolution in Intelligence is taking on its true dimension in Sophia and developing networks to support the creation and diversification of businesses. The 21st century is being actively prepared, and with it new structures of thought, reflection and action.

It would take an entire book, not a brief article like this, to describe the many facets of current activity in Sophia Antipolis.

The handful of pioneers from the beginning have grown to over 250 businesses with 8,500 direct jobs; when indirect jobs are counted, Sophia Antipolis supports 100,000 people. But most of all Sophia Antipolis, the largest Science and Technology Park in Western Europe, has helped transform mentalities in our *département*.

The Côte d'Azur, a land of science and technology, the nucleus of a "California" in Europe, is no longer a laughing matter. True, we are still far from the dynamics of a Silicon Valley or the powerful universities of Berkeley and Stanford, to mention only the San Francisco area. But enthusiasm and creativity are here. We must pursue to win.

Financial support from the département

The General Council supported the project from the start and provided the conditions for its completion. Since 1985, its President, Jacques Médecin, has brought greater vigour and determination, efficient support to extensions of Sophia Antipolis and preparing the future.

The policy of the *département* prepared by the Prefect Pierre Costa and approved by the majority of the General Council stressed the vital importance for the economic future of the Alpes-Maritimes of the intellectual potential of *substantia grisea*.

It provides funding - on a level reached in no other *département* - for higher learning and the national research centres on the site of Sophia. It is setting up an International Centre of Advanced Communications to be managed by Maurice Papo, former IBM Director who has been Director of *Association Sophia Antipolis* since 1968. It is equipping premises to attract industrialists, in particular Amadeus, a centre for developing the software for Air France, Iberia, Lufthansa, SAS in common.

The new mixed economy company in charge in particular with equipping and promoting the Park, is methodically developing its action.

And of course, DATAR, proud of its child on the shores of the Mediterranean, brings its support, too.

And academics, scientists and industrialists from the world over recognize that this bit of scrubland we call *garrigue* in Provence has become an intellectual centre that is beginning to count.

Conclusion

And what of the future? To become an essential pole in a new Renaissance on the Mediterranean, the mother of our civilization. Industrialists, big and small, service companies, financial institutions of Sophia - those that actually built Sophia - are determined to ensure the success of their endeavour. This of course is what was already asserted in the 1972 brochure.

And they - we - are not technocrats interested only in business and money. We have other aspirations.

A 21st-century Florence, as I said in the 1972 brochure. We are still far from it. But we can recall that the first investment made on the site was an outdoor theatre...

Its architectural assets have already put Sophia "on the map". And there are so many other projects: a modern *Villa Médicis*; philosophy classes for CEOs; a Modern Art Foundation; a European Operatic School; a meeting-place for artists and modern technology; developments towards communication.

A 21st-century Florence.

Together, we can achieve this.

February 1991

From now on, Nice has its Latin Quarter: Sophia Antipolis, a Technology Park the entire world admires.

I want to pursue this action so Nice can become a brilliant European metropolis. With your support.