

ROMORANTIN

# Leonardo da Vinci Imagines The First Modern City

by Karel Vereycken

The undertaking of a great infrastructure program to boost the economy of an entire nation is not a new, “utopian” concept! Such an approach appeared notably during the Italian “Golden Renaissance,” and subsequently, as we will indicate here, in France.

In Autumn 1516, the great Renaissance engineering and water-management expert Leonardo da Vinci accepted the proposal of the French King François I to travel to France for a special task. The king and his sister, Marguerite de Navarre, who protected Rabelais and other members of the Erasmus youth movement, called on Leonardo to design and build an entire new city in Romorantin, and make this rather small city into the new capital of a blossoming French kingdom.

Leonardo’s design of the city is based on a dynamic concept of managing flows of water, air, energy, and human cognition. As recent historical and archaeological research demonstrates, Leonardo envisioned much more than building some kind of static “*città ideale*”: Romorantin is de-



*Leonardo da Vinci (1452-1519), was not only one of the greatest artists of the Italian Renaissance, but the leading engineer and water-management expert of the era. This self-portrait, in red chalk, is from ca. 1512.*

signed as a revolutionary living being. At its center: human cultural and living areas and, in the surrounding suburbs, eight modern water mills, capable of mechanizing the traditional wool production of the region. Beyond, between Romorantin and Amboise, the marshland was to be drained, and transformed into irrigated farmland.

At the center of Romorantin, there was to be a magnificent new palace for the French court, combining French taste with the new styles of the Italian Renaissance architects; but the entire city would be organized around, and on water! To fight the lethal epidemics that plagued urban centers in those times, Leonardo imagined the first “modern” city. While people would commute via canals, special underground conduits would bring in drinking water on the one side, and evacuate, via a sewer system, the

waters used by men and horses, who were guarded in “automatic” horse stalls. Leonardo indicates in his Codex Atlanticus (65 v-b) that never again would ar-

chitects create “such a vast agglomeration of people, packed one on top of the other like goats in a herd, which fill all corners with their smell and spread pestilence and death.”

## Realizing Charlemagne’s Dream

To start the project, Romorantin, which is a city build on the Sauldre River, a sub-tributary of the Loire, had to be connected to the Loire, by a series of dams, canals, and modern locks which are depicted in a drawing one can admire in Leonardo’s Codex Atlanticus

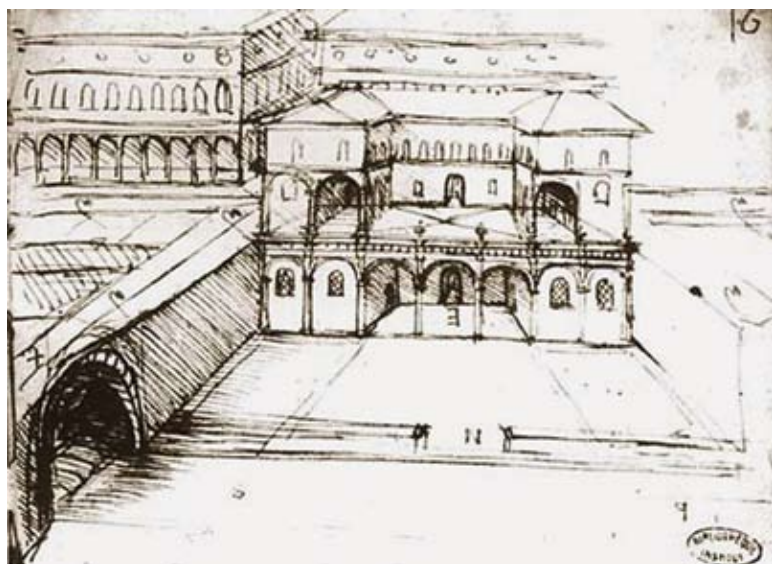
(f. 240-r-c). For this purpose, in January 1518, King François I allocates “4,000 gold pounds to make the Sauldre River navigable till the point where it enters the River Cher [leading into the Loire].”

Exactly at the same time, Leonardo was elaborating the plans for the port of the “Havre de Grace” in Normandy (now the port of Le Havre at the mouth of the Seine, and on the Atlantic) and undertook the study of the precise route required for building a canal linking up the Loire, France’s longest river, that runs across the country, from eastern Burgundy, to western Nantes on the Atlantic, via a canal (today the Canal du Centre) with the Saone-Rhone River that goes all the way down till the Mediterranean.

In short, Leonardo envisioned the realization of Charlemagne’s and Alcuin’s plans for a “two-ocean canal,” a vast development corridor used for industry, manufacturing, the draining of marshlands, and agriculture.

Italian Renaissance and Leonardo expert Carlo Pedretti, who, in 1972, wrote a book about Leonardo’s Romorantin program, declared in a video interview last year, that Romorantin could honestly be compared “to FDR’s Tennessee Valley Authority project”!

The Herculean undertaking did take off as planned in 1517, but the project was killed



These three drawings from Leonardo’s Notebooks, indicate some of his designs for an “Ideal City,” and its mechanical and infrastructural requirements. The image of an Ideal City (1488-89), with modern sanitation facilities (above), was inspired by a plague outbreak in Florence; “automatic” horse stalls in this stable provided a sewer system to eliminate waste (below); the design for the San Marco lock, in Milan (ca. 1500), indicates Leonardo’s lifelong interest in hydraulic engineering.

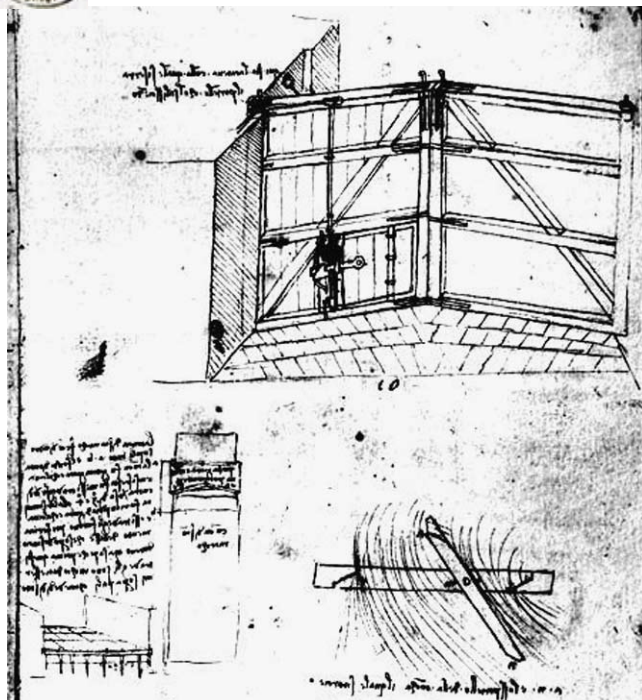
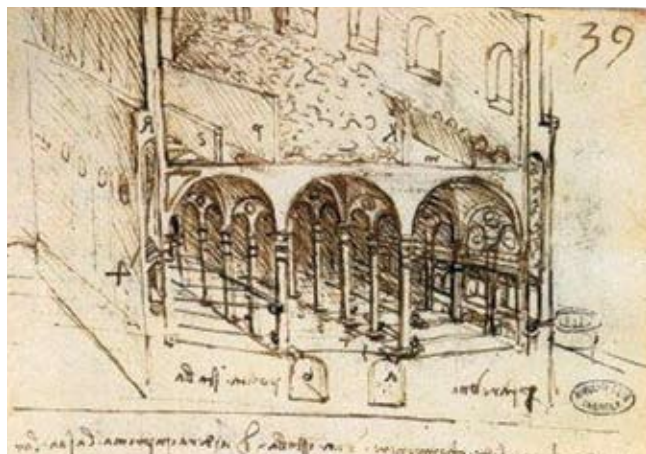




FIGURE 1

## France, with the Loire River Highlighted



*In 1516, Leonardo was called to France by King François I, to design a beautiful new city as the capital of the kingdom at Romorantin, on the Sauldre River. Leonardo planned to connect Romorantin to the Loire, by a series of dams, canals, and locks.*

in early 1519, according to some by the plague, to others for lack of funding. In reality, Leonardo was living his last hours (he died on May 2), and there was no one ready to replace him in this giant undertaking. Significantly, after Leonardo's demise, François I shifted his outlook and, to compete with Charles V of Spain, he decided to build Chambord, the largest Renaissance castle on the Loire. Thus, the city building plan died with Leonardo.

As of June 9, an exhibit in the Romorantin museum describes the vast scope of what is called the "forgotten project" of Leonardo da Vinci, so tomorrow's leaders can learn how to shape their policies for the post-Sarkozy era.

## The Leonardo-Machiavelli Plan To Divert the Arno

In the first decade of the 16th Century, two extraordinary Florentines collaborated on a great infrastructure project: to alter the course of the Arno River. The Renaissance genius Leonardo da Vinci, and the founder of modern statecraft Niccolò Machiavelli, working in the court of the famous *condottiere* Cesare Borgia, devised a plan that would redirect the flow of the river, using canals and locks, to change its course, as it travelled from Florence out to the Tyrrhenian Sea. Diverting the river would not only provide Florence with an outlet to the sea, bypassing the city's military rival Pisa, it would help to limit damage to the surrounding farmlands from the flood-prone Arno.

Like today's NAWAPA project, the plan, if carried out, would have altered

the economic and political realities of the time, and reshaped and upshifted the Biosphere to the benefit of mankind.

This aerial map of the Arno Valley was drawn by a young Leonardo in about 1473, and shows his early interest in hydrodynamics; it is a harbinger of his later Arno and Romarantin projects.

—Bonnie James

