An Island Unto Itself

A French project team manages competing currents —of water and stakeholder concerns—to restore Mont-Saint-Michel's maritime character.

BY MATT ALDERTON

PHOTO BY PATRICK DONTOT COURTESY OF SYNDICAT MIXTE BAIE DU MONT-SAINT-MICHEL

The greatest challenge … is to achieve changes in the uses and habits of Mont-Saint-Michel. The conditions of access for those who live and work in the Mont have changed significantly."

—Laurent Beauvais, Syndicat Mixte Baie du Mont-Saint-Michel and Regional Council of Basse-Normandie, Normandy, France

PHOTO BY EMMANUEL FRADIN

Time has been kind to Mont-Saint-Michel. More than 1,000 years ago, monks began building a monumental abbey atop the tidal island 1 kilometer (0.6 miles) off the coast of Normandy, France. But although the abbey is well preserved, the UNESCO World Heritage site ceased to be an island in 1879, when a causeway to the mainland was built. It was paved in the 20th century, when tourists began flocking to the site.

Thanks to a 20-year US$300 million restoration project concluding this year, Mont-Saint-Michel's original maritime character is back.

"Since the 19th century, the maritime environment of Mont has been strongly disrupted by human intervention," says Anne Garçon, head of the Tourist Information Centre, Syndicat Mixte Baie du Mont-Saint-Michel, Beauvoir, France. The consortium of regional governments is the project's sponsor. "Land closed in on the Mont with the construction of polders—fertile agricultural land reclaimed from the bay. The Mont lost its status as an island."

Reversing centuries of encroachment is no easy task. Faced with a slew of challenges—environmental, cultural, political—the project succeeded largely


In 2005

PHOTO BY ESPACE DIFFUSION


By 2025

IMAGE BY MG DESIGN

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Mont-Saint-Michel as seen from neighboring farmland

PHOTO BY AUDREY HEMON

due to the team's commitment to breaking down silos to ensure collaboration among specialized contractors.

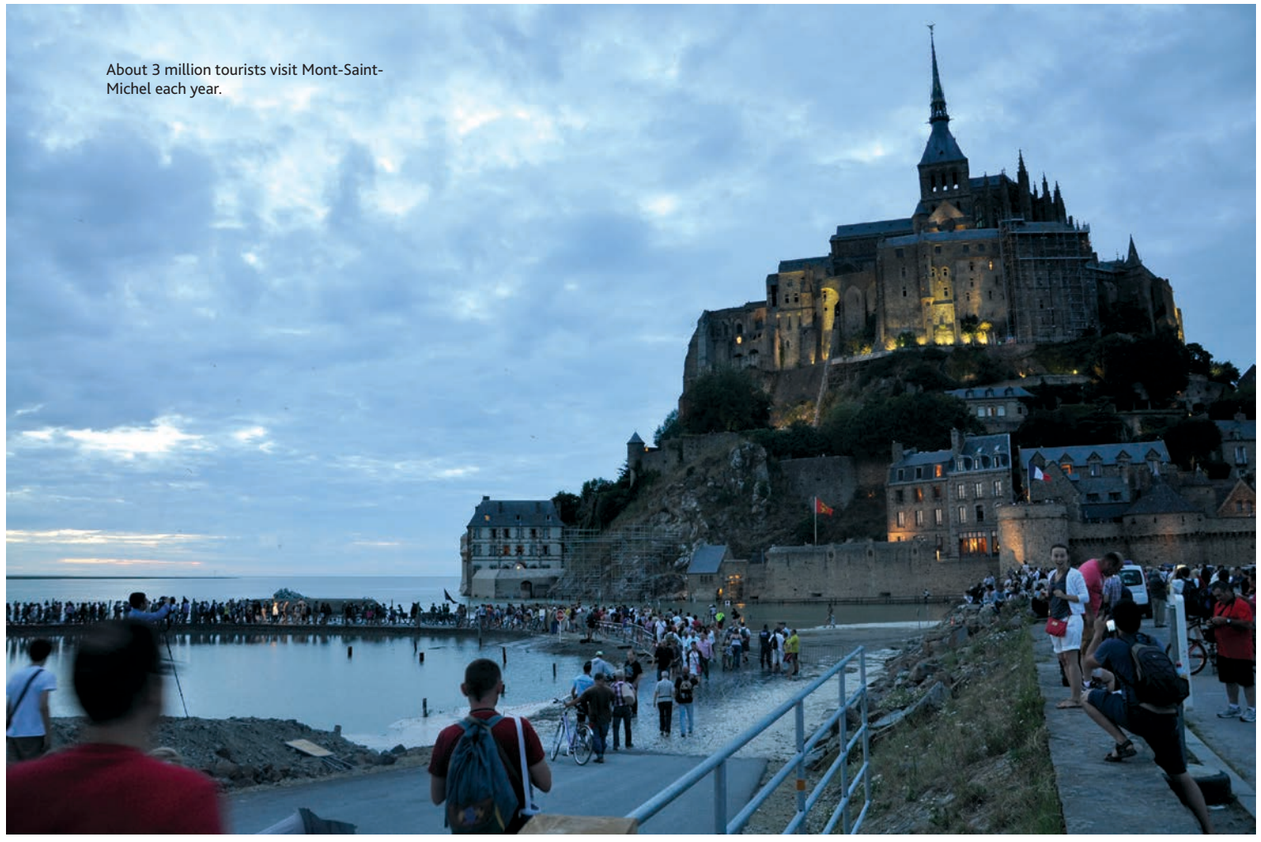
"In the highly compartmentalized modern world, knowledge-sharing during a project is not assured," says Luc Weizmann, a Paris-based architect who was part of the project team. "But it's essential to overcome conflicts."

A Holy Site, Modified by Man

Mont-Saint-Michel dates back to the 8th century, when the bishop of Avranches built a church dedicated to the archangel Michael. Two hundred years later, the Duke of Normandy gifted the Mont—at that time accessible only during low tide—to Benedictine monks, who built a Romanesque abbey crowning the island's summit. Below it, a medieval village once populated by pilgrims now hosts approximately 3 million tourists every year.

The marshy setting they encounter while visiting is a modern creation. When the French began reclaiming coastal lands for farming in the 19th century, Ms. Garçon says, they constructed dikes to divert local rivers. With less water flowing into the bay surrounding the Mont, it became surrounded by silt. The situation was exacerbated by construction of the causeway, which accelerated the deposition of sediment at the foot of the Mont. Salt marshes took root. The problem worsened when another dam was constructed in 1969 to protect farmland from high tides.

In 1995, the French government hatched a restoration plan, Ms. Garçon says, "because without intervention, the Mont would lose its maritime character in less than 50 years."


About 3 million tourists visit Mont-Saint-Michel each year.

PHOTOS COURTESY OF SYNDICAT MIXTE BAIE DU MONT-SAINT-MICHEL

The Two-Part Project

Following a decade-long study phase, the project commenced in 2005 with two principal objectives. The first was to allow tidal waters to once again reach all the way around the Mont and prevent silt from building up around the island. The second was to move the tourist infrastructure surrounding the site—which had included 15 hectares (37 acres) of parking lots on the causeway—to the mainland.

Meeting both objectives required a holistic approach to planning and execution, according to Mr. Weizmann. "Success depended on many factors—environmental, functional, symbolic and cultural, as well as economic," he says.

The project remains on schedule and on budget, despite major challenges in each of these domains.

Mr. Weizmann encountered the first hurdles in 2006, when his team began building a new dam at the mouth of the Couesnon River. It captures river water and tidal seawater and expels it into the bay twice a day, flushing out built-up sediment. "Its location presented great difficulties," Mr. Weizmann says. "Although the dam is set back from the open sea—less exposed than it would have been in the bay itself—its design required consideration of both the tides and river floods, and sometimes violent weather."

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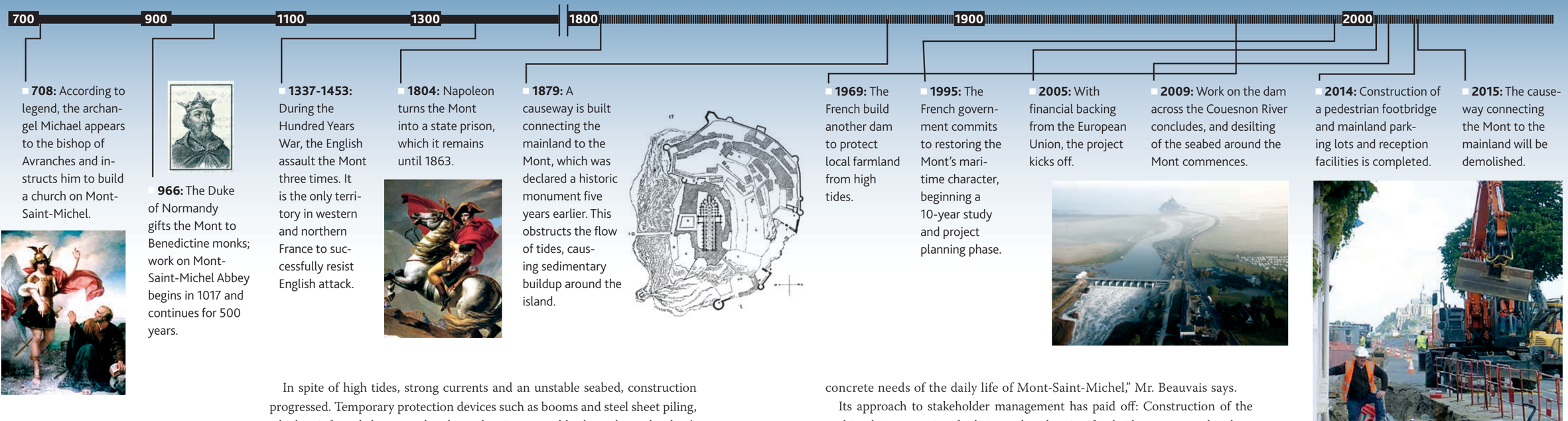
The Making of the Mont



In spite of high tides, strong currents and an unstable seabed, construction progressed. Temporary protection devices such as booms and steel sheet piling, which reinforced the ground to keep the site accessible throughout the dam's three-year construction, were critical for success.

"During project design, studies took into account all the constraints of location, functionality and access to the site," Mr. Weizmann says. "So during the implementation, the project did not change."

People Problems

Upon successful completion of the dam in 2009, the project team shifted its focus to creating new tourism infrastructure servicing the Mont. This includes a new pedestrian footbridge replacing the causeway, parking lots and reception facilities, as well as a new shuttle bus system.

This construction phase was riddled with stakeholder challenges, rather than engineering challenges. They included opposition from local shopkeepers and cyclists, who objected to changes in how the Mont is accessed; criminal proceedings against the local mayor, who was accused of corruption for trying to locate shuttle bus stops near shops and restaurants he owns; and labor strikes by abbey staff, who successfully lobbied for their own dedicated shuttle buses to the Mont, separate from tourist vehicles.

"The greatest challenge of the operation is to achieve changes in the uses and habits of Mont-Saint-Michel," says Laurent Beauvais, president of the Syndicat Mixte Baie du Mont-Saint-Michel and chairman of the Regional Council of Basse-Normandie in Normandy, France. "Indeed, the conditions of access for those who live and work in the Mont have changed significantly."

Satisfying critics has required constant communication with local stakeholders. To arrive at solutions satisfactory to all, the Syndicat Mixte established a consultation group of hoteliers, restaurateurs, tourist guides and cycling and equine associations, among others. The organization "conducts regular adjustments to finalize the project and make it consistent with the concrete needs of the daily life of Mont-Saint-Michel," Mr. Beauvais says.

Its approach to stakeholder management has paid off: Construction of the parking lots, reception facilities and pedestrian footbridge was completed on schedule in 2014. This year, old structures (including the causeway) will be deconstructed, and areas affected by construction will be restored.

The project's final stage will commence post-2015 with the use of hydro-sedimentary lasers to measure silt and sedimentation around the Mont. "A new phase will begin after 2015: monitoring of work, whether from an environmental point of view or in terms of operation and maintenance," Mr. Beauvais says.

Teamwork Turns the Tide

Last July, crews completed the footbridge nearly connecting Mont-Saint-Michel to the mainland. One hundred and twenty meters (393 feet) from the Mont's main entrance, visitors encounter a ford that can be traversed only during low tide—the same way crossings were made in the 8th century. Just a few weeks later, exceptionally high tides turned the Mont into an island for the first time in more than 130 years.

The momentous occasion—when sea finally kissed sea again—was the product of technical problem solving, certainly. Mostly, though, the project's success was a result of teamwork, according to Mr. Beauvais.

"The project's different partners meet regularly as a steering committee on all topics," Mr. Beauvais says. "These meetings bring together all the partners involved around the same table. As the project's owner, the Syndicat Mixte delivers progress reports. It's these meetings and the technical committees arising therefrom that solve the technical problems encountered."

Just as important, the steering committee addressed cultural problems. "The local project managers stayed abreast of the needs of residents of Mont-Saint-Michel. This has been essential," Mr. Beauvais continues. "The fact that all local political partners are involved has really helped to maintain dialogue so that all needs were taken into account throughout these 20 years of study and construction." **PM**

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