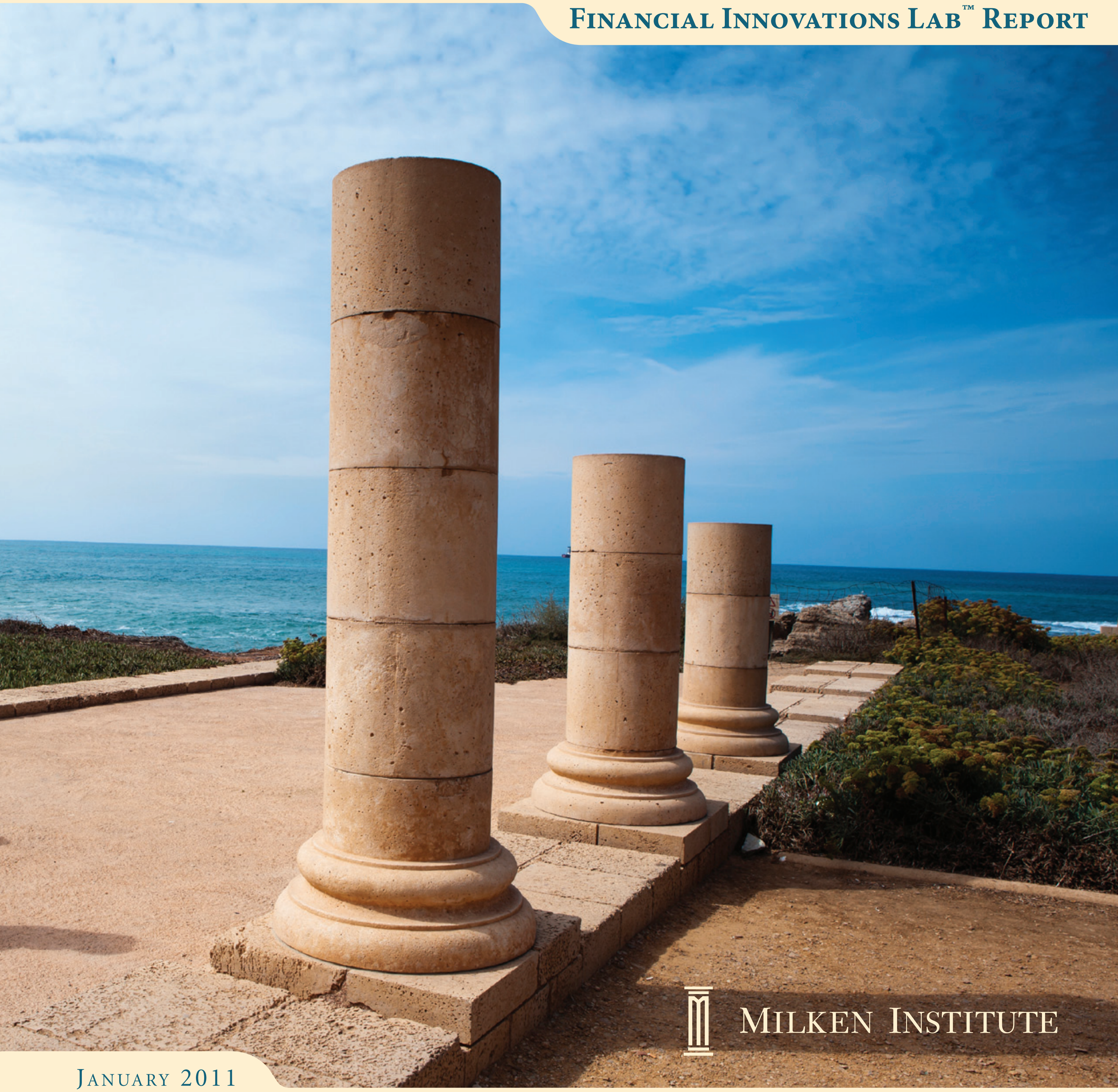
CULTURAL HERITAGE AS AN ECONOMIC DEVELOPMENT RESOURCE IN ISRAEL

Financial Innovations Lab™ Report



Milken Institute

January 2011

Financial Innovations Labs bring together researchers, policymakers, and business, financial and professional practitioners to create market-based solutions to business and public policy challenges. Using real and simulated case studies, Lab participants consider and design alternative capital structures and then apply appropriate financial technologies to them.

This Financial Innovations Lab Report was prepared by Caitlin MacLean and Glenn Yago.

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Acknowledgments

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About the Milken Institute

The Milken Institute is an independent economic think tank whose mission is to improve the lives and economic conditions of diverse populations in the United States and around the world by helping business and public policy leaders identify and implement innovative ideas for creating broad-based prosperity. We put research to work with the goal of revitalizing regions and finding new ways to generate capital for people with original ideas.

We focus on:

human capital: the talent, knowledge, and experience of people, and their value to organizations, economies, and society;
financial capital: innovations that allocate financial resources efficiently, especially to those who ordinarily would not have access to them, but who can best use them to build companies, create jobs, accelerate life-saving medical research, and solve long-standing social and economic problems; and
social capital: the bonds of society that underlie economic advancement, including schools, health care, cultural institutions, and government services.

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We are nonprofit, nonpartisan, and publicly supported.

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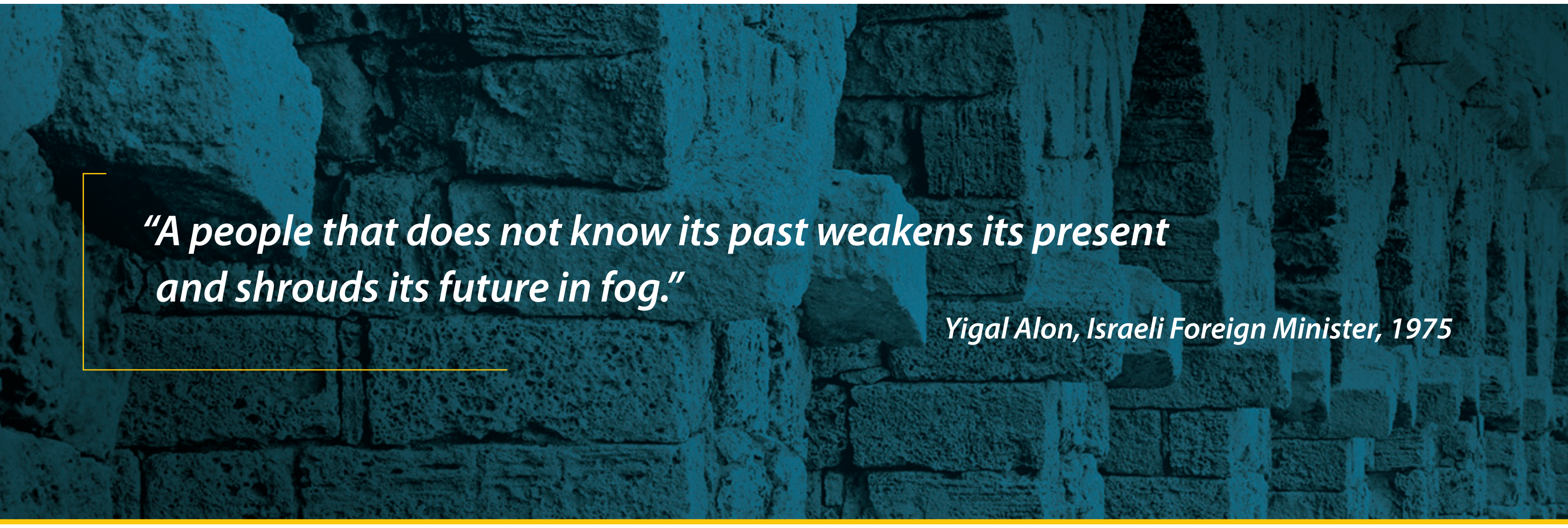


"A people that does not know its past weakens its present and shrouds its future in fog."

Yigal Alon, Israeli Foreign Minister, 1975

Introduction

For millennia the rugged hills of the Judean desert east of Jerusalem have offered some of the region's best hiding places. Jewish rebels, Byzantine monks, and Muslim prophets have all found shelter or sanctuary within the desert's harsh landscape. Sometimes the objects they secreted there have come to light, such as the fragments of parchment and papyrus we know as the Dead Sea Scrolls. More often, the relics of Israel's past—from ancient tombs to medieval churches and Ottoman artifacts—lay hidden just beneath its modern villages and cities. The country's position at the crossroads of three major faiths and its history of cultural migration have ensured it a crucial role in the discovery and preservation of many of the world's most important sites and antiquities.

Caves like those that stored the Dead Sea Scrolls for thousands of years are numerous throughout the Judean Hills.

Yet funding historical preservation is a significant challenge. The entire chain of events—from initial excavation, conservation, and cataloguing of relics to site preservation and development for public access—is in effect a process of market creation and expansion.[1] It is also a capital drain for Israel and other archaeologically rich countries whose national budgets are constrained to begin with and/or face drastic cuts in the wake of the global economic crisis. By the end of the chain, when the sites have been fully excavated and it is time to think about making them accessible and self-supporting, there is often barely enough funding for basic maintenance, facility development, and educational services. How ironic that it is this end of the chain that can bring about real economic growth for local communities through tourism and outreach.

In Israel the process of site excavation and preservation usually starts with a grant from either a university or private donor, or through a budgetary expenditure from the government, or a combination of the two. The funds are meant to be utilized throughout the chain of events necessary to preserve the site, whether through the creation of a public park or by re-covering the site to keep it from further deterioration. The portion set aside for preservation and long-term sustainability, however, is often marginal relative to the total grant amount. And in the wake of Israel's economic downturn, its ministerial budgets are not likely to be increased significantly. Consequently, no effective financing mechanisms exist for long-term site preservation, though some relief occasionally trickles down to current sites and new excavations. Now, more than ever, there is a strong need for creative financing solutions.

We have proposed that historical sites be understood as resources, similar to water, natural gas, or oil. What is the price to pay for preserving the record of human cultural evolution? Who should pay? Can a greater economic value be attributed to heritage, beyond a museum visit or tour of an archaeological site? With much of their liquidity frozen in recent years, the capital markets are looking for new investment models and safe economic returns. Could the next emerging asset class lie beneath the ground?

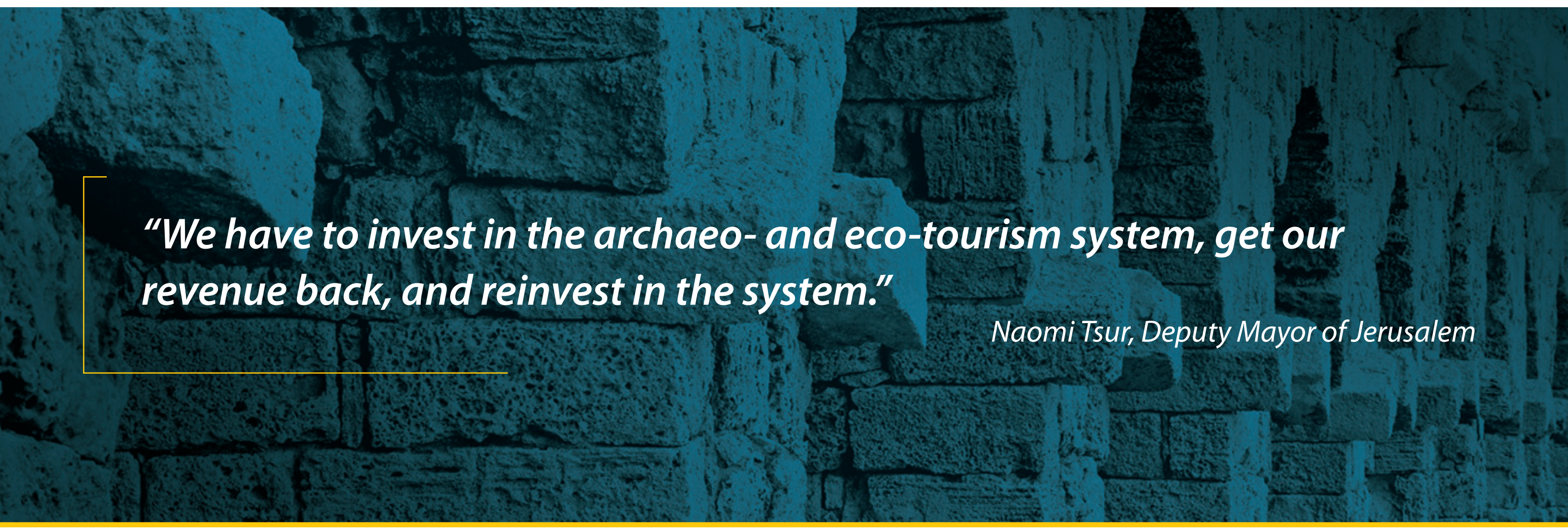
The potential financial return from assigning a greater value to archaeological heritage is vast and untapped. It includes archaeo-tourism, infrastructure growth, and educational outreach, and represents a unique opportunity to promote community development, generate job creation, rescue fragile cultural assets, and fund discovery. A country's heritage districts and archaeological parks are often underutilized resources that could become engines of sustainable local and regional development. And site preservation could find a self-sustaining solution through the use of financial structures that involve both private and public funds.

Photos by Caitlin MacLean.

The Dead Sea Scrolls are housed in the Shrine of the Book, a wing of The Israel Museum in Jerusalem.

The Dead Sea Scrolls, recovered from the Judean Hills in 1947, have generated millions of dollars in revenue. The value of the collection is based not only on its archaeological worth but also on its ability to generate income—from touring exhibitions to television specials—for further archaeological and cultural heritage conservation and education. The scrolls have created modern jobs and promoted economic growth. They represent a model that could benefit communities around other cultural sites, promoting development and growth from the Negev to the Galilee.

To this end, the Milken Institute organized a Financial Innovations Lab in Jerusalem in December 2009. It was focused on designing economic models to fund preservation and conservation while monetizing the economic value of archaeology, thus making both the archaeological process and the subsequent site management sustainable. Sponsored by The Goldhirsh Foundation in coordination with the Israel Antiquities Authority, the Nature and Parks Authority, and the Ministry of Finance, the Lab was attended by government officials, archaeologists, capital market experts, tourism officials, academics, public finance experts, entrepreneurs, and private investors. It focused on specific solutions to promote economic sustainability and job creation.


"We have to invest in the archaeo- and eco-tourism system, get our revenue back, and reinvest in the system."
Naomi Tsur, Deputy Mayor of Jerusalem

Part I

Issues & Perspective

With more than 30,000 archaeological sites mapped and identified within its borders, Israel possesses one of the highest concentrations of archaeological resources in the world.[2] Despite such riches and a national passion for archaeology, control over these resources is fragmented.

The Israel Department of Antiquities and Museums was originally created within the Ministry of Education, but in 1999 its name was changed to the Israel Antiquities Authority (IAA) and it moved under the Ministry of Culture and Sports.[3] The IAA "is authorized to excavate, preserve, conserve, and administrate antiquities when necessary," and operates in accordance with a 1978 antiquities law that protects all manmade objects predating 1700 CE, as well as botanical forms remaining from before 1300 CE. The law also includes an unusual provision that allows for the sale of certain antiquities held in private collections before 1978.[4] Consequently, there is a thriving antiquities market, particularly in Jerusalem and Jaffa.

All excavations are undertaken either by IAA archaeologists or by universities, whose permit applications are approved by Authority directors. In 2007 the Authority's archaeologists conducted 337 excavations and issued 444 permits to begin work.[5] The IAA also publishes scholarly work on the archaeologists' findings and contributes to the marketing of sites and relics. It also runs a conservation lab that restores antiquities from sites under excavation and those already open to the public.

The IAA mandate to oversee site excavation and conservation ends once an archaeological dig has concluded and the site has been selected for development as a public/tourist destination. At this point, supervision of the area is turned over to the Nature and Parks Authority (NPA). To date there are 64 developed sites in the country. This Authority, which works within the Ministry of Environmental Protection, oversees regulations surrounding the day-to-day site functions, from maintenance to special events. The NPA has its own staff of archaeologists who work to preserve the physical integrity of the developed sites.

The NPA also works with the Ministry of Tourism to design and promote the sites for development and educational outreach. The latter has limited regulatory control over the sites themselves but does have oversight of marketing, as well as potential knowledge-based programs within a site through its tourism school, where guides are trained. The Ministry of Tourism would become directly involved in plans to expand related businesses—hotels, restaurants and attractions—that might surround a site.

In addition, a number of governmental and quasi-governmental agencies share overlapping and sometimes competing oversight of archaeological discovery and conservation. These include the Israel Land Authority, the Interior Ministry, the Jewish National Fund, and an array of local and regional authorities. Each ministry or authority has an interest in preservation, but competing agendas and a lack of policy alignment leave uncertainty when crafting solutions for long-term funding. “No one sets policy,” explained architect Giora Solar. “Each entity pulls in its own direction, each with its own budget. There is no one guiding hand from above.” This ambiguity in roles and leadership creates obstacles that impede the archaeological value chain and create significant red tape.

The lack of archaeological site infrastructure is noticeable, from makeshift signage to inadequate protection from the weather, as demonstrated by a wet cardboard sign in Zippori.

Learning Policy Lessons From Abroad

The challenge of preserving cultural assets is not unique to Israel. Governments elsewhere struggle to preserve and maintain archaeological sites and protect areas that have been identified but not yet excavated. Governance surrounding archaeological resources varies by country; much appears to depend not just on the health of the country’s treasury, but on the value a population places on its resources, and thus the budget allocated for their preservation. However, some legislative models have enjoyed greater success at maximizing the overall value of cultural heritage while reducing bureaucracy.

In Italy, for example, within the Ministry of Culture, the director general has the authority to make policy regarding cultural patrimony, or ownership rights. Because the republic owns everything considered to be an “antiquity,” it has a well-regulated system in place to monitor what is unearthed, and by whom. It also understands the need for one voice—the director general’s—deciding matters of policy for archaeological matters, regardless of how far along a site or excavation is.

Italy has also made strides toward finding sustainable funding solutions for larger sites. All profits from Pompeii, for example, return to the site, not to the central ministry.[6] This was a first, albeit imperfect, step toward circumventing a central bureaucracy that collects revenue from all sites with no guarantee that the equivalent amount will be returned to a site’s budget. A possible next step is privatization of the site itself. Following public outcry over the recent collapse of the House of the Gladiators in Pompeii and concerns about further damage at the site, critics have raised accusations of long-term government neglect that might be overcome by changing site management to a private company.

In Jordan, archaeological issues fall under the purview of the Director of Antiquities in the Ministry of Tourism and Antiquities. Like Italy, Jordan strives to bring uniformity to its antiquities policy. In addition, the government approved the creation of local councils that promote site-specific preservation. The Petra Development and Tourism Region Authority, for example, monitors that World Heritage Site and engages the local community through educational outreach programs.[7]

There are few sites more recognizable then Machu Picchu, whose terraced steps and altars amid the majestic Andes provide an iconic image of pre-Columbian culture. Throughout the Peruvian countryside there are equally impressive sites, but until July 2010, when the prime minister created the Ministry of Culture, no centralized government agency existed to oversee cultural stewardship. Prior to 2010, the Instituto Nacional de Cultura (INC) operated within the Ministry of Education and was charged with protecting and promoting Peruvian culture. While there was a sense of national urgency to protect the country's artifacts, there was no corresponding financial commitment to ensure this protection, and critics had complained that the regulatory oversight of cultural assets was too fragmented.[8]

Loopholes in the market for antiquities

Because it is legal to buy and sell artifacts held in private collections before 1978, Israel enjoys a thriving antiquities market. The Israel Antiquities Authority has a registry system in place that allows individuals to apply for dealer's licenses, which must be renewed each year and remain legal so long as the dealer's inventory is cataloged in the Authority's registry.[9] In a given year, there are between 65 and 75 recognized dealers.[10]

Few other destinations attract the numbers of tourists who want to take home "a piece" of their experience as does the Middle East, and the Israeli antiquities market has also seen significant illegal activity. The legal supply simply can't keep up with demand, and the funding doesn't exist to police effectively. Consequently, looting is extensive, and many stolen relics make it to local shops for purchase by unwary tourists.

Shady dealers have found a loophole in the system. When a dealer receives a permit and the store's inventory is taken, each object receives a registry number and is cataloged with a brief description. A "clay pot," for example, is listed as No. 25. A tourist who comes in and wants to buy item No. 25 must ask the dealer for an export permit. But few tourists know of this rule and many dealers neglect to inform them. So many tourists purchase their items and leave the country without properly documenting the purchases. The tourist who buys pot No. 25 can leave without detection because insufficient funding has made enforcement virtually nonexistent. The dealer can then take another pot in his collection, one that perhaps he bought on the black market, and assign it the No. 25, as there is no documentation that the original No. 25 was ever sold.[11]

The ability to mobilize Israel's competitive advantage in information and communications technology, and digital and material sciences, could provide improved regulation and enforcement of legislation to restrict the illicit trade.[12]

The Funding Challenge

Lab participants agreed that maintaining sustainable funding is one of the greatest challenges to preserving archaeological artifacts and sites. Yet the constant need for capital is not unique to business in the cultural heritage sector. It may help to remember that startups across the business spectrum face financial risk—and not just during the seed stage, when an idea is just taking shape. A startup can arrive at financing gaps in the early stages of development and expansion, and in its late-stage growth. Potential funding sources for business startups include government grants and tax incentives, angel investors, venture capital, and project finance.

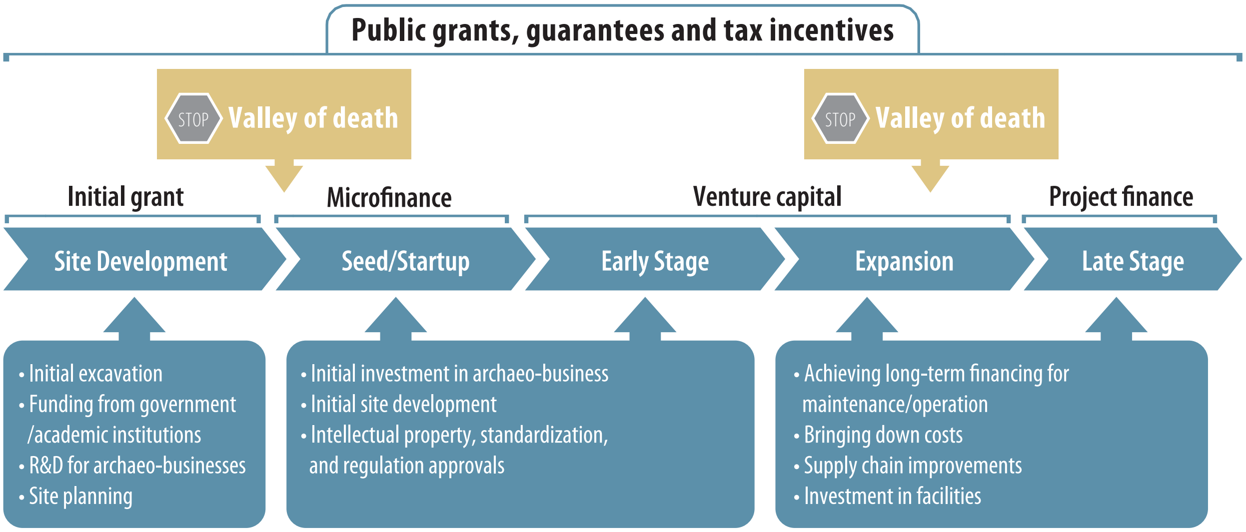
All of these are also available to archaeological development. The physical fragility of cultural assets adds another level of risk, of course, and the challenges specific to archaeological excavation must be understood. It will help nonetheless to look at the risks and funding gaps characteristic of entrepreneurship. From there, specific finance models appropriate to the funding challenge can be built.

Figure 1 illustrates the four typical stages of business startup. The "initial grant" stage is particular to archaeological site excavation and the selection processes that determine whether the site will be chosen for development as a public/tourist destination. Otherwise, the flow of the financial model is quite similar to that for any other startup. It is immediately clear that most of the funding of Israeli archaeology comes to an end after the initial grant. This is when preservation efforts reach their first "valley of death." It occurs after a site has been excavated and selected for public access and as a tourist destination, when most of the allocated funding has already been used. Yet this is when, like a startup, the site must show that it will have self-sustaining potential. In other words, this is the point at which Israel must start looking at its cultural and historical assets in the same way that a startup entrepreneur would eye his product or service.

In the current Israeli model, various ministries and universities provide funding that *in theory* should underwrite progress along the entire site development chain. But in practice that doesn't happen, especially further along the chain, when funding is needed to develop and preserve a site for public access. Israel doesn't yet use a business plan model for funding its archaeological sites, and Lab participants agreed that doing so could change the funding paradigm.

FIGURE 1

Mapping the valleys of death



Source: Milken Institute.

Underfunded Government Programs

The budget for the Israel Antiquities Authority in 2008 was only $36 million to excavate, conserve, and develop what is arguably one of the country's most valuable asset pools: its cultural heritage. This represents approximately 0.05 percent of the total national budget.[13] The IAA budget is funded both by direct support from the central government and fees and charges collected from activities the Authority initiates, such as revenue from permits to antiquities dealers. Given that Israel's cultural heritage possesses tremendous economic potential, the 0.05 percent allocation is woefully low to preserve all of the country's treasures.

Once an excavation is finished and turned over to the Nature and Parks Authority, the funding challenge becomes even greater. This, as noted earlier, is the first "valley of death," when the site, like any startup, needs to move past research and development and begin to commercialize. Like the IAA, the NPA is significantly under-funded. The NPA, whose annual budget was roughly $80 million in 2009, received only $4 million to spend on site development.[14] Nearly half of its total budget comes from site-derived income.

But two-thirds of the country's 64 developed archaeological sites are operating in the red, according to Ronit Moran, director of economics and budgets for the NPA. The five or six most popular sites, including Masada, Caesarea, and Megiddo, subsidize the rest. At Megiddo, known as the biblical site of Armageddon, all revenues—from entry tickets to souvenir shop sales—go back to the NPA to be reallocated among the 64 sites. This has meant disaster for the site, where infrastructure upkeep has suffered, there are no resources to attract more visitors, and self-sustaining mechanisms have become nonexistent.

Fortunately, the government has responded to the challenge. In February 2010, Prime Minister Benjamin Netanyahu announced the creation of a national Heritage Infrastructure Plan, whose purpose is to renovate 150 biblical, archaeological, and historical sites. He also announced a government investment of US$100 million for the program over five years.[15]

Exhibitions poorly housed at Zippori, in the Galillee, have sustained water damage. A lack of funding has led to neglect at sites across the country.

Lack of Infrastructure

Tourism in Israel is a $12 billion industry, employing more than 223,000 people and representing 6 percent of expected GDP in 2010.[16] Currently, most international tourists spend on average six days in Israel, mostly in Jerusalem, with a few day tours either to the Dead Sea and Masada, or to Tel Aviv.[17]

With more funding allocated to upgrading the archaeological sites, and to developing their operational infrastructures—and infrastructure development could include hotels and restaurants, tour companies that take in nearby attractions to the benefit of local communities—the sites' contributions to the tourism sector would vastly increase. But without these improvements, it is unlikely that the sites will attract more tourists even as their maintenance needs grow dire.

Israel's archaeological sites often operate as silos with little integration with the local economies. The major sites are included in tour packages that provide transportation from one to the next, but those off the main tourist routes languish in relative obscurity. Zippori, in the Galilee, has Roman, Jewish, Arabic, and Ottoman influences, not to mention beautiful Byzantine mosaics, but it lies far from the interstate and has little to offer in the way of dining and accommodations. It is not often a destination unto itself, but part of a day-trip itinerary.

In the Galilee, many sites resonate with Christian, Muslim, and Jewish tourists, but few tours target specific interests in the unique contribution of each faith tradition. Many sites could be marketed together (for example, a trio of Nabatean ruins in the Negev: Shivta, Avdat, and Kurnub, which contain early Christian structures). This would require the proper physical and technological infrastructure, including better access on roads, improved Internet platforms for commercial opportunities, and better services, including restaurants and more affordable places to stay within the region.

Involving the local community

Because local communities have no economic ties to the archaeological sites in their back yards, they have no role in building the virtuous cycles that infrastructure development could produce: the better the amenities, the more visitors and the more revenue to build more amenities and attract even more visitors. Regional councils and other local bodies provide governance for the towns and villages, but these are not empowered to raise funds for the sites, to increase site-related businesses, or promote tourism. They reap none of the economic benefits of their proximity, despite the great potential for employment in the hospitality and tourism industries.

Similarly, the central government has provided its own stumbling blocks for involving municipalities in funding preservation. For example, because of the limits of the *arnona*, Israel's largest municipal tax, which assigns values to residential and commercial property, developers of land around archaeological sites have no incentive to consider the opportunities of related area development when building. The government has, thus far, not used municipal, property, and improvement taxes to increase the payments from the developers or those who purchase the properties.

"Tourism is of great importance to the country, and we must view it as a privilege for the curious. Anyone who impedes the development of tourism brings about war, and anyone opening the gates of the country brings education—and, therefore, tourism in Israel is the antithesis to war."

—President Shimon Peres

These regulatory and funding challenges, coupled with a public and private disconnect from the process, all illustrate the need for new solutions to promote sustainable preservation of Israel's cultural assets.

The Financial Innovations Lab

In December 2009, the Milken Institute convened a Financial Innovations Lab in Jerusalem to focus on strategies for leveraging public funds with private capital to finance archaeological preservation and conservation. The ideas were based on a previous Lab held by the Institute in Santa Monica in January 2008. Specific models were examined that could provide much-needed funding and lessen the illicit trade of antiquities on the region. Participants included representatives from Israel's Antiquities Authority, the Nature and Parks Authority, the Ministry of Environmental Protection, the Tourism Ministry, the Ministry of Finance, the Israel Museum, local municipalities, internationally based archaeologists, international and local capital markets experts, project finance specialists, and representatives from international legislative bodies, including UNESCO.

Participants broke into working groups to review the potential revenue streams and local economic benefits of specific sites. Jaffa, Megiddo, and Jerusalem were singled out for their need of creative solutions for long-term preservation, and each was used as a case study for similar sites. Jaffa served an example of the larger, more popular sites; Megiddo, the smaller and less-visited sites; and Jerusalem, a city site. Top priorities were to increase overall sustainability of the sites and to rethink the marketing of each for mass consumption. All participants agreed that the sites must work in coordination with local communities to promote preservation and generate economic development.

Photo courtesy of the Milken Institute.

Lab members gather outside Mishkenot Sha'ananim, where the Financial Innovations Lab was held. The Lab examined several regulatory and financial innovations to promote archaeological preservation while generating local economic growth.

"In today's situation, the regulator is also the developer and the manager, and is also economically accountable for the site's performance. The regulator should be just that—a regulator."

Giora Solar, Architect, Solar Architects

Regulatory Barriers & Solutions

Lab participants debated the ability of regulatory innovations to improve the financial landscape for archaeological preservation. They identified barriers that impede economic growth within the sector and found that policy modifications could improve the funding challenges.

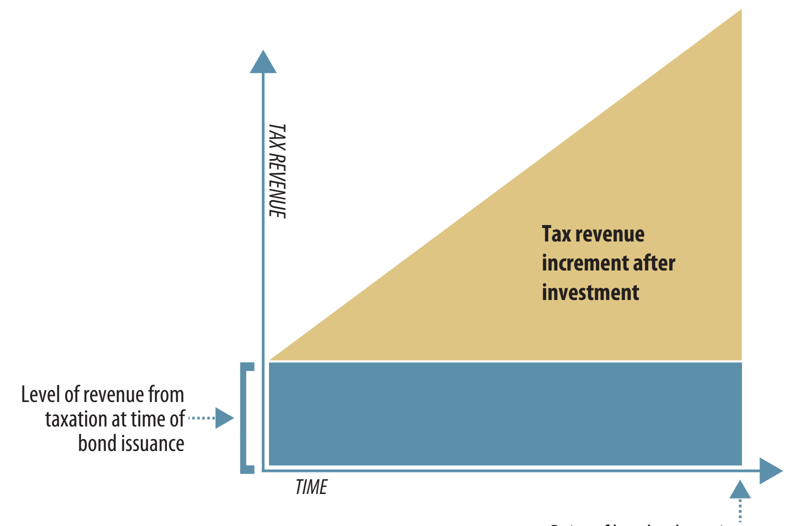
Barrier: Taxation and land-use policies limit revenue-generating potential

Israel's largest residential property tax collection is called the *arnona*. It is collected by municipalities to pay for local services, as determined by the Knesset. Unlike property taxes in most Western countries, the *arnona* rate is not determined by a property's value. It is based on the size of the property, both the physical structure and lot, and the zoning district within which it falls. If the neighborhood undergoes significant improvements, for example, adding a park with better views of a local river, then the government can decide to levy a "betterment" tax, but property rates rise and fall according to zone determinations, which do not always take into consideration environmental or cultural enhancements to the community. Both the *arnona* and the betterment tax go to the Tax Authority, part of the central government, and not to municipalities. It is the Tax Authority that allocates redistribution of the tax revenue, and periodically it is not to the same area from which it was collected.

Israel's tax code does not exploit other revenue streams that could be implemented to contribute to funding models that promote site sustainability. For example, Israel has not considered the use of tax increment financing (TIF), in which funding would be raised today, based on projected increases of the property values due to their proximity to a particular site. Tax increment financing is a common public financing mechanism that uses projected increases in future tax revenue to finance debt (usually a municipal bond) for current renovations and maintenance. When an area is designated as a "tax increment district"—or in this case, a "tourism improvement district"—the Tax Authority assumes that the debt-financed improvements within the district will raise property values and that the resulting higher tax revenue will pay off the debt.

Evidence shows that when properly applied, property values and revenues within the tax increment district grow quickly, especially when coordinated with accessible land use and sound infrastructure planning. TIFs have been used for

FIGURE 2 *Tax increment financing*

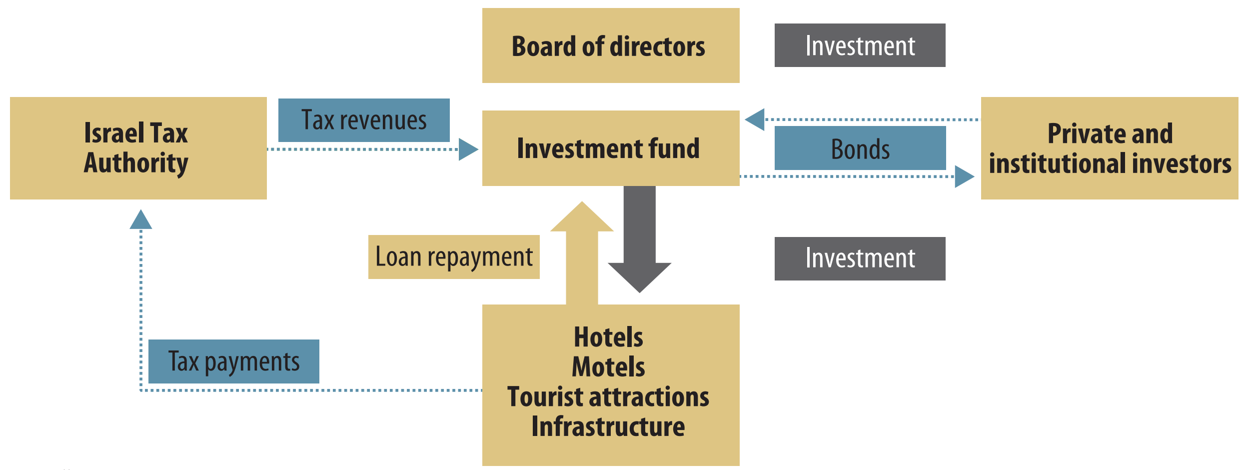


Source: Milken Institute.

development in underdeveloped and sometimes impoverished and neglected communities where economic growth would not have taken place otherwise. TIFs originated in California in the 1950s as an innovative way for communities to raise local matching funds for federal grants. In Israel, rather than issuing bonds, the local communities of a tourism improvement district could engage in public-private partnerships and use funding from philanthropic groups, such as the Keren Hayesod (Foundation Fund), the Partnership Program of the Jewish Agency, and others, which would then be repaid through the future tax revenue.

With the creation of these tourism improvement districts, and with the TIF concept modified into a public-private partnership, land owners and developers would pay taxes that reflect the increased value of their property.[18] Once the original debt had been repaid, the revenues from higher taxes would also be the basis for sales of additional tax-exempt bonds, the proceeds from which could be disbursed as loans further along the development chain, to local businesses interested in promoting tourism activities around archaeological sites. This would be especially beneficial in areas in the north, with its clusters of smaller sites, but few amenities. A model for a tourism improvement district, figure 3, has already been designed and could provide a useful basis for implementation.[19]

FIGURE 3 *Tourism improvement district model*



Source: Milken Institute.

The archaeo-tourism industry could be significantly expanded with such a tax structure. From site-linked restaurants and bed-and-breakfasts to gift shops and rest stops, the possibility for the creation of a niche industry is great. These businesses could also be integrated into nearby attractions, including other national parks and hiking trails, as well as campsites and other outdoor activities.

An alternative to the TIF financing model would be another regulatory model that sets aside revenue from land development fees levied for properties around the sites. This would involve working with regional authorities and has shown some success.

Lab participant Ze'ev Temkin told of his ongoing work with local development around a site outside Herzliya Pituach, an affluent suburb of Tel Aviv along the Mediterranean. The site is next to land that the owner wanted to develop into an exclusive residential area. In this case, the owner/developer was also the central government, acting through the Israel Land Authority. However, the site stood between the proposed development and the sea, and would have blocked the residents' access to the public beach. Tempkin proposed that some of the undeveloped land be set aside, outside of the archaeological site, for local shops and restaurants, and that the profits they generated be returned to the site. In exchange, the government could build its development and residents would receive free admission to the site. A small percentage of the money generated from the sale of the land would go to a general preservation fund. This model could be localized to other sites.

Solutions:

- Create tourism improvement districts.
- Work with regional authorities to set aside development revenue for preservation.

The great seaport of Herod's kingdom, Caesarea was the headquarters of Roman rule in Israel. Impressive ruins of the Roman city (including a splendidly preserved theater and an imposing aqueduct) and a later Crusader-era fortified town stretch along the water's edge. The excavations seen by visitors today are only a small part of what's waiting to be discovered; new finds are constantly being unearthed.

Barrier: Operational constraints limit revenue potential

Current NPA regulations prohibit the use of archaeological sites for activities other than regular tourist visits. Until the past decade, the public could rent space in the archaeological parks for weddings, bat mitzvahs, etc.[20] This practice was stopped in part because of legitimate concerns that the additional usage could potentially damage the sites. And with increasingly limited budgets to protect the site during off hours, there was a serious concern about the safety of the archaeological assets within the parks.

Participants, many of whom were archaeologists with concerns about the integrity of the sites, concluded that there may still be ways to ease the restrictions without compromising site security. With the right infrastructure in place, weddings and other events could occur, and commercial activities, such as movie filming, could be considered. Many sites, for example, have outdoor amphitheaters where local troupes could perform, as they do in Caesarea. And because such performances and other activities would constitute "outside events," revenues could be captured in the site's budget and would not have to go back to the Nature and Parks Authority. Within a tourism district, a portion of the revenues from sales and services would be channeled back to the site itself. Without such opportunities, the sites remain locked into a single revenue stream model—tourist visits—and dependent on a single revenue source, the NPA.

These solutions would require that local populations have a stake in the process. Local communities have previously complained about noise and additional traffic, but were excluded from participating in finding solutions to those issues, as well as solutions that would generate income. There must be ways to engage the communities so that they better understand that a sustainable site could benefit their towns and villages.

Solutions:

- Allow a limited amount of events on-site, with regulations over crowd size, logistics, etc.
- Develop appropriate site infrastructure for commercial and entertainment use.

Barrier: No funding is designated for long-term site maintenance

Several Lab members discussed the budget limitations set by the Israel Antiquities Authority itself. For example, to excavate in Israel, archaeologists and their affiliated institutions must receive a permit that is reviewed every four years. They only receive this permit if they can prove that their budget will cover the proposed work. They must also set aside 5 percent of their budget for post-excavation site preservation, research, and development, including the costs to cover the site temporarily if necessary. This reliance on a 5 percent set-aside that is rarely enough to cover expenses increases the valley of death when an excavation has finished and when additional preservation will begin.

Increasing the amount of the set-aside budget might seem like a drop in the bucket in terms of the vast capital needed, but it could be leveraged through other sources, such as philanthropic investment or a public-private partnership, to generate a more significant pool of resources. The additional funding could be combined, if necessary, with capital raised through a preservation fund established through land development, or through the use of TIF financing and other revenue sources, to create a large pool of capital for sustainable preservation.

Solutions:

- Increase the required amount of set-aside funding in the initial phase for later site preservation.
- Mobilize site excavation and preservation donors by having their donations also channel into funds that can facilitate later development.

"It has to be about local decision-making and empowerment."

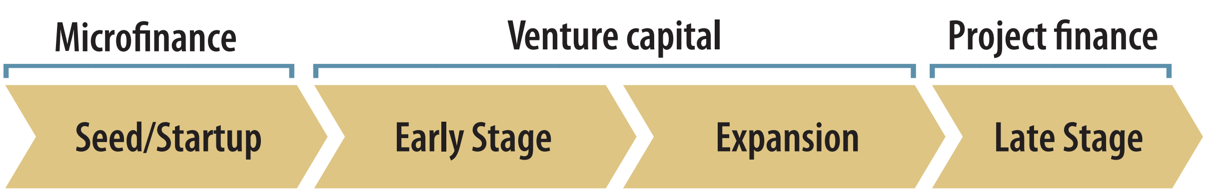
Lawrence Coben, Executive Director, Sustainable Preservation Initiative

Financial Innovations for Archaeological Preservation

To best utilize archaeology as a development resource, both the public and private sectors must increase their investments. Regulatory solutions that could bring governmental support throughout the value chain can be complemented with investment models to move site preservation beyond the hurdles of the valleys of death.

Participants offered a number of solutions to jump-start this investment and identify potential revenue streams. The solutions represent different funding resources along the business development chain illustrated earlier in figure 1. As seen in figure 4, they focus on each stage of growth. However, they are not meant to be mutually exclusive and can be used during various stages as part of a financial toolbox to create long-term funding sources. At each of these stages, evidence from best practices elsewhere suggests that cultural tourism tied to archaeology and local economic development methods reduces poverty and increases growth opportunities.[21]

Figure 4 *Financing value chain*



Source: Milken Institute.

Solution: Use Community Microfinance as a Source of Sustainable Preservation

One of the biggest challenges appears to be engaging local communities to participate in site sustainability efforts. As noted above, Israel's regional councils have no mandate or incentive to involve their communities in funding and tourism efforts. In most countries, however, the successful sites—successful in terms of tourism revenue and reduced destruction or looting—are those that engage the surrounding community in appropriately scaled development.

Archaeologist and entrepreneur Lawrence Coben related his experience in working on a site in central Bolivia. Incallajta, called "Bolivia's Machu Picchu," lies at an altitude of 10,000 feet and is situated a hundred miles from the nearest major city. The site includes the largest single-room roofed building in the Western Hemisphere constructed prior to the arrival of the conquistadors.[22] When Coben's team arrived in 2001, the site was in need of preservation and protection. The local community, unaware of the economic value its local treasure held, used the land as a grazing field. Schoolboys played soccer there. And while four to six foreigners arrived each day, usually with privately hired guides, there was no infrastructure to manage even this small-scale tourism.

Coben spent $50 to put up a gate on the road to the entrance and persuaded locals to charge nothing to Bolivians, but $10 admission to foreign tourists. Within a week, he had his return on the investment. With revenue from the site, the community could afford to pay its farmers to graze elsewhere and was able to develop guidebooks, train locals as guides, and engage local schoolchildren by taking them to museums to understand the history behind their site.

This bottom-up approach to preservation will probably never again cost $50. However, the model of local engagement through appropriately scaled development is one that can be replicated in Israel. Microfinance, broadly defined as financial services for low-income individuals, can be used via micro-loans and credit from NGOs or other microfinance institutions to support businesses and development around sites.

Participants discussed Coben's model of providing small loans with an expectation of either no return or one much below market rate. Coben's Sustainable Preservation Initiative, which recently issued its first grant, aims to give loans for site management and has begun reviewing potential sites and communities that would benefit from such loans. Similar philanthropies and micro-lenders who expect little or no return on their "investments" could create portfolios of sites in which to "invest." In Coben's model, NGOs would offer a micro-loan to a local entrepreneur, who then could repay the principal with no interest. He could even receive the "loan" as a grant that would not have to be repaid. The combination of the loans, philanthropic donations, and other direct equity investments would ensure that the NGOs maintained their capital resources while diversifying the projects.

Unfortunately, as previously noted, current NPA regulations dictate that all income derived on sites in Israel go back to the Authority's central office. The micro-loan approach, however, could provide significant opportunities for restaurants, shops, bed-and-breakfasts, and rest stops outside the sites that can still exploit the brand appeal of archaeology to increase tourism. These do not have to be lavish resorts; these do not have to be a small gate. Participants agreed that many areas of the country, especially the northern region, can benefit from targeted, appropriate development. Micro-loans and other financing options could help make these new businesses a reality.

Solution: Utilize Venture Capital Clusters

As noted earlier, most startups obtain their initial capital from seed money, be it a micro-loan or private loan or help from friends and family. With sufficient success, their financial demands grow. If they show promise, they move into greater early-stage development so as to eventually expand the business. This is where venture capital takes notice and steps in to help.

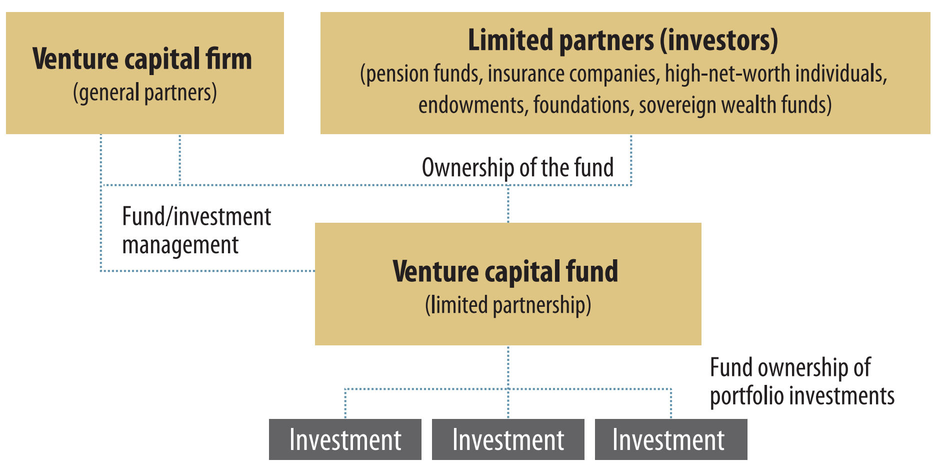
Photo courtesy of the Milken Institute.

Brent Lane of the University of North Carolina explains how a venture capital portfolio approach could benefit the archaeo-tourism industry.

> *"Venture capitalists invest in entrepreneurial firms, and they invest in the growth of new sectors."*
>
> *—Brent Lane, University of North Carolina*

Usually, VC funding involves a firm of general partners (GPs) who find and join up with a group of limited partners (LPs) to invest in funds that channel capital into a portfolio of projects (see figure 5). The LPs may include institutional investors, governments, philanthropies, and wealthy individuals. The portfolio of projects is diversified to mitigate the risk of failure that is inevitable for some new businesses. Venture capital can support new businesses from startup through more advanced finance stages that may involve first-round, mezzanine, and bridge financing; the average investment period lasts from seven to ten years. Venture capital is significantly more effective in increasing a company's longevity because there are more resources available through the capital markets, and over a longer period of time. This would be especially true in the case of archaeological development, given the uncertainty of governmental budgets for the relevant ministries.

FIGURE 5 *Venture capital fund structure*



Source: Milken Institute.

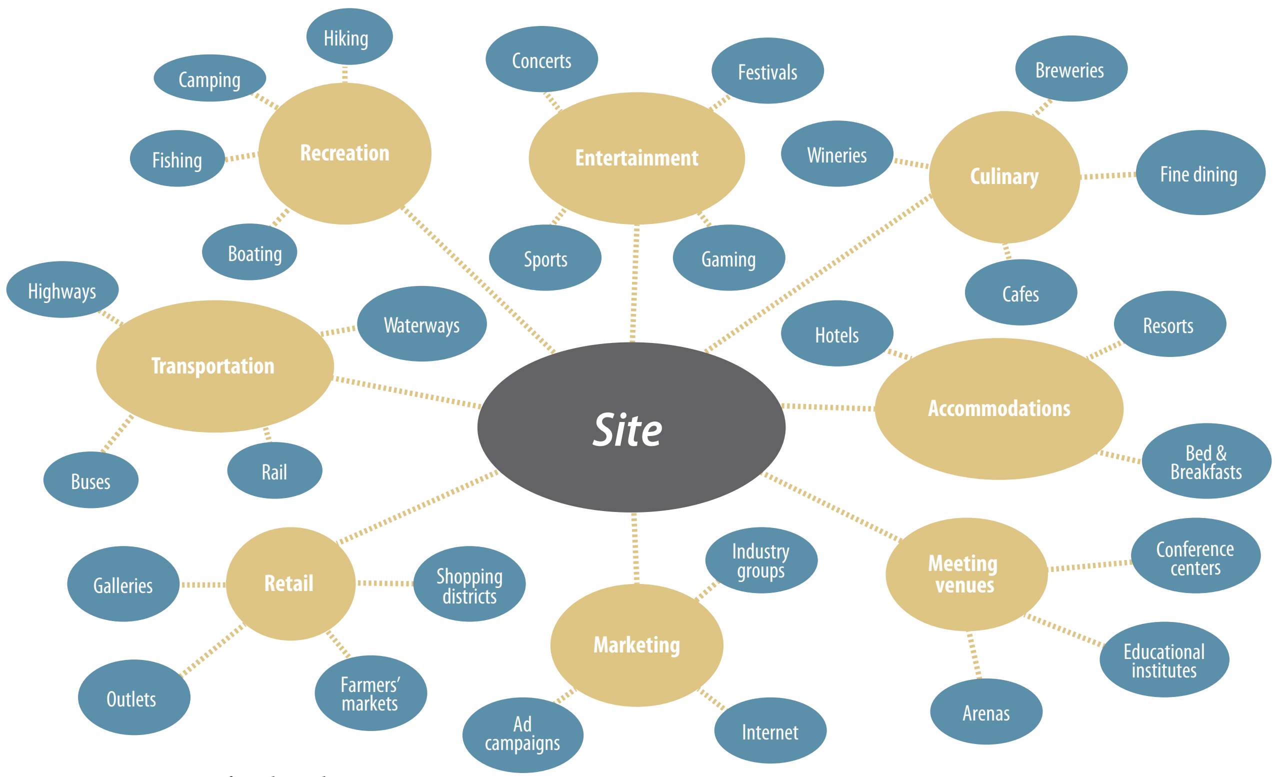
Over the past decade, Israeli venture capital firms have raised in excess of $9 billion.[23] With more than 480 firms active in the country, including many leading international VCs with local offices, Israel is second only to the United States in VC market size. Recent, less restrictive tax laws have made the country more attractive for foreign investors.[24] And while most of the venture capital has been concentrated on the high-tech sector, there is also a burgeoning clean-tech sector. Environmental protection certainly extends to heritage sites, which would benefit from similar investment models.

Another benefit of VC financing is its ability to create growth, not only for a business but also for an entire sector. A cultural heritage VC fund might support a restaurant, a bus company, a school for tour guides, and a bed-and-breakfast. The interconnection of these businesses ensures that as one business grows, others will. This also encourages a deeper level of sustainability for the sector as a whole.

Given the variety of activities already under way across the archaeological spectrum, from excavation and related trade books to site development and tourism opportunities, there would be a great benefit to encourage the growth of clustering within VC investments. Clustering is capacity building, strengthening the interconnections and therefore strengthening the entire industry. In the model seen in figure 6, each participant along the cultural value chain is more actively engaged in the economic development of the industry, from the archaeologist to the site developer to the conservator to the restaurant owner to the tour guide to the gift shop owner to the tourist. As participant Steve Zecher explained, business clustering is successful in that it "begins the discussion about how to best improve the product, looking at the whole cluster as a product, as opposed to the individual business as a product."

FIGURE 6

Venture capital clusters

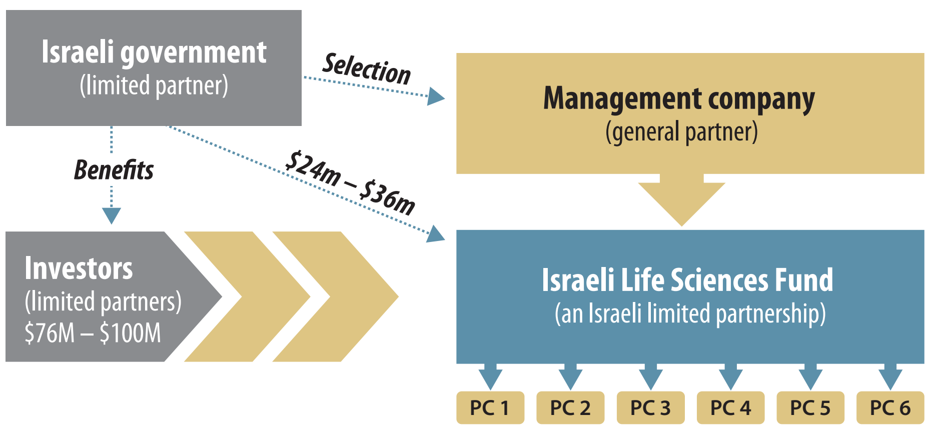


Source: Brent Lane, University of North Carolina.

VC financing for cluster growth around cultural heritage sites is possible with a model that engages the government and leverages public funding through joint-investment ventures. This would not be dissimilar from current models in other industries. For example, the Office of the Chief Scientist recently announced the creation of four funds constituting an Israeli life sciences public-private partnership. Figure 7 breaks down one of the funds, which was created to accelerate new R&D for biomedical technologies. The government would act as one of the limited partners and commit around $100 million to lure another $300 million from private investment. The government wouldn't provide guarantees to all losses but would accept first loss, e.g., absorb any initial losses from non-performing investments, to mitigate the risk for the other limited partners. (This announcement was based on recommendations from a previous Milken Institute Financial Innovations Lab held in December 2008.) Given the interest of Prime Minister Netanyahu in generating funding for archaeological and heritage sites, this option could be useful in leveraging public capital on a more long-term basis for regional development.

Under that VC model approved by the Ministry of Finance, a government anchor investment could forgo up to 80 percent of its pro-rata distributions from the fund to all other investors in the fund, potentially magnifying gains and offsetting losses. The challenge would be to generate a similarly attractive fund structure for private investors to partner with public investment in archaeological sites and cultural heritage.

FIGURE 7 *One of four funds within the larger life sciences fund*



Source: Ora Dar, Office of the Israel Chief Scientist.

Solution: Create Project Finance Opportunities Through Archaeological Development Bonds

Venture capital can jump-start a business, but with the limited period before an investment exit is expected, usually seven to ten years, a new stage of capital must be tapped. The next funding level, "project finance," is used to overcome a business's long-term hurdles.

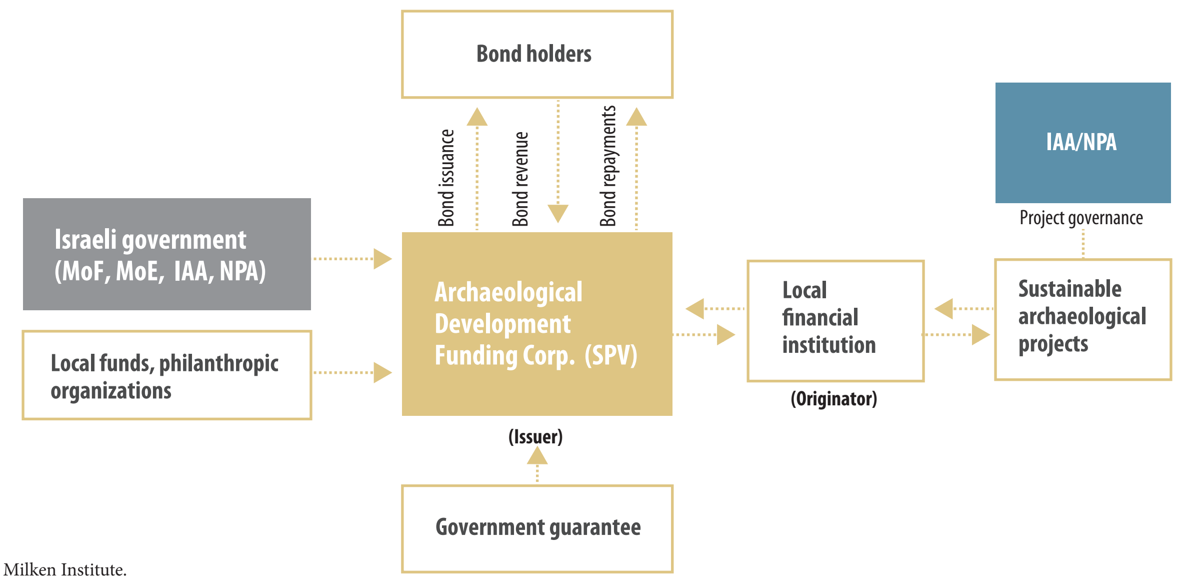
For most industries, this phase occurs when the business expands, e.g., reaching commercial scale, a new audience. For financing cultural heritage sites, the long-term challenge is supporting the maintenance costs. These include constant and variable costs to maintain the sites at levels that guarantee a quality experience for visitors, and arguably more important, to maintain the site itself. Project finance often includes the use of large-scale debt financing through the creation of public-private partnerships or special purpose vehicles, for example a state bond issuance to pay for new road construction.

A previous Financial Innovations Lab introduced the concept of archaeological development bonds (ADBs). These would be similar to bonds that Israel and other central governments and local authorities already issue to fund infrastructure services. Long-term, fixed-income bonds are, in fact, the primary means to generate the significant level of capital needed to provide a country's essential needs. The archaeological development bonds could help bridge the final "valley of death," the capital gap in late-stage financing, as shown in figure 4, earlier in this report.

ADBs would provide fixed returns with relatively low risk. They would be issued by a government entity, such as the Ministry of Finance, through the use of a special purpose vehicle or financing facility (partnerships that are established solely to manage assets and reduce potential risk). As shown in figure 8, a hypothetical Archaeological Development Funding Corporation, the SPV, raises funds from the sale of bonds it issues. The bonds are channeled through the originator, a local or regional bank, to provide loans to sustainable archaeological projects. The IAA and NPA could oversee projects and monitor their success.

Revenue from the projects is repaid to the Archaeological Development Funding Corporation, which repays the bond holders. To lend more creditworthiness to the ADB, the government provides guarantees or agrees to take a first loss. Local foundations and other philanthropic organizations also provide a credit enhancement by donating to the Archaeological Development Funding Corporation, through a designated credit reserve fund, which is a form of guarantee.

FIGURE 8 *The ADB model*



Source: Milken Institute.

Because of the relatively low risk of the ADBs, they could attract a broad range of investors, including financial institutions, such as pension funds, hedge funds, insurance companies, and other institutional investors. The bonds could be sold to international investors as well. Given the recent reform to attract global investment in Israel, a bond structure could prove an ideal model. The bonds' value could come from a pool that includes the value of the increase in property values as well as the potential revenue streams from the projects. Indeed, the ADB model could bridge capital gaps well beyond the startup phase and into the phase when longer-term financing is needed to sustain the needs of the archaeo-businesses and sites.

Potential Revenue Streams

Any archaeo-business plan using the financial solutions suggested during the various stages along the value chain must map its resources in order to understand potential cash flow.

Leases

Leasing antiquities exhibits between museums is a common practice that could be expanded to include leasing to investors as part of a repayment—for example, if the terms of investment in the ADB facility included a "payment in kind," such as the lease of an object from a particular site, or if a foundation or museum endowment wanted to receive a large group of antiquities in return for helping fund site development at either the microfinance or project finance stages.

Given the more cautious attitudes toward purchasing antiquities outright, and the legal and moral issues involved, leases can also offer the opportunity for Israel to derive revenue from its relics without compromising international ownership laws. A collector who feels uneasy about buying from a dealer may be more ready to lease museum-quality objects. However, current lease practices are often limited in their terms: length of lease and type of object for lease are often dictated by the physical requirement and the amount of effort needed to transport ancient, often fragile objects. Consequently, the leased items rarely realize their economic value, as the requirements are prohibitive.[25] A rare exception is the lease of the King Tut traveling exhibit, which has generated millions in revenue and serves as an excellent example of what is possible if the antiquities are properly marketed as a package. Likewise, the traveling exhibit of the Dead Sea Scrolls has generated significant revenues.

"I believe in investing in people. That's one of the things missing now."

—Prof. Joshua Schwartz

Terms of future leases could mandate that a portion of the profits be returned to a fund that would, for example, feed into the archaeological bond model. The potential for tapping into the leasing revenue stream, participants determined, is great.

TABLE 1 *Potential Revenue Streams*

Conventional streams	Streams from regulatory changes	Streams from financial models
Donations and grants	On-site events and concerts	Educational materials
Museum admissions	Tourism improvement districts	Guide services
Leased antiquities	Land development revenue	Media content
	Required budgetary increases	Hospitality/cuisine
		Artisan crafts/replicas

Educational Materials

After a typical excavation, archaeologists publish their findings in academic journals. And while they do not always do so in a timely matter, this part of the value chain, transferred to reading material for public consumption, could help with one of the challenges that Lab participants identified: bringing schoolchildren and other groups to understand and appreciate a site, creating a long-term cycle of understanding about archaeology as an asset.

If archaeologists could be mobilized to produce their findings, which could be the basis for the publication of more tourist-friendly books, pamphlets and other products, then the site could be widely appreciated throughout the community, and have potential revenue in the sale of the guidebooks and other educational material. These could be produced in coordination with the IAA and the Tourism Ministry to maximize the value of the products. Currently, many sites in Israel lack even proper signage and guidebooks.

On-site educational programs, specialized tours, or craft classes could all increase revenue to the sites and engage the local communities. Training tour guides and giving them incentives to include less-popular sites on tours were also discussed as opportunities.

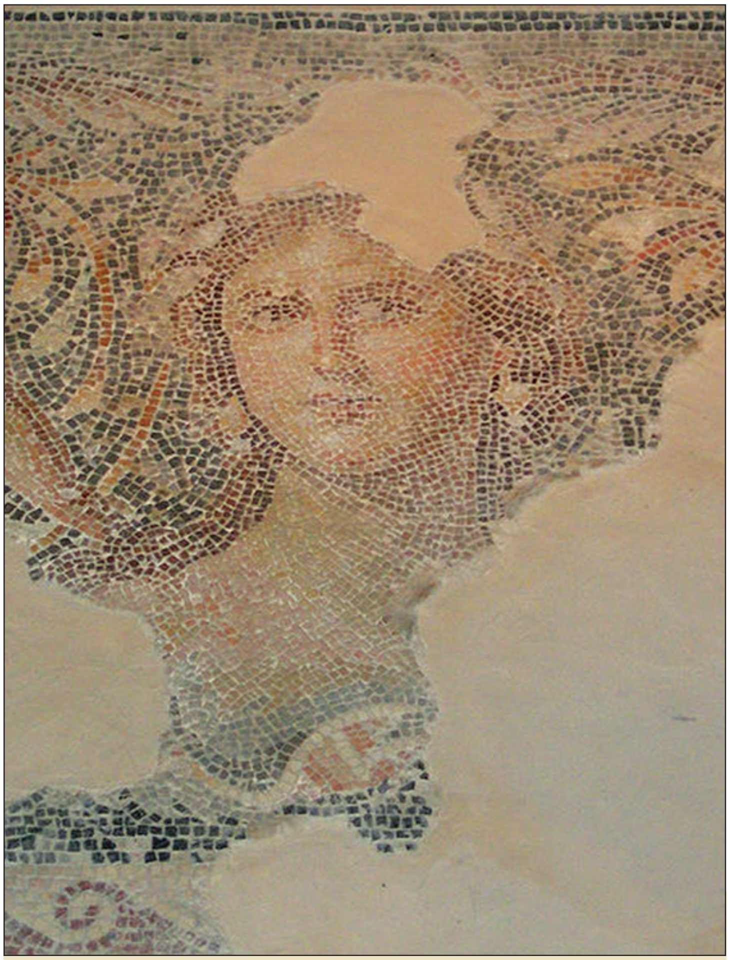


Photo courtesy of the Milken Institute.

The "Mona Lisa of the Galilee" is the focal point of the exhibit at Zippori.

Reproductions and Replicas

Walking through the shops in the Old City in Jerusalem, a tourist can find many souvenir reproductions amid the legal antiquities for sale. But at archaeological sites, Lab participants noted, the quality of souvenirs is very low. A much bigger market may exist for replicas and reproductions of what is actually on view at the sites. For example, Zippori, in the north, boasts the "Mona Lisa of the Galilee," a stunning mosaic from the Roman period. However, there are no mosaic replicas for purchase at the site. The gift shop sells the kinds of stock souvenirs available anywhere in Israel; there is virtually nothing unique to the site itself. As suggested by participant Brent Lane, the site could host mosaic classes for the local community, where attendees would learn ancient techniques, hone their skills, and create a market in replicas.

This model could be replicated in northern cities, where poverty is growing, and in the south, where the government is attempting to engage the local Bedouin community.

Valuing Intellectual Property

Increasingly, intellectual property rights are emerging as both issue and opportunity in economic development as it pertains to archaeology.[26] Perhaps the greatest potential revenue stream identified by Lab participants is in transferring cultural heritage into intellectual property rights that are salable and that drive traffic, tourism, and commerce to archaeology.

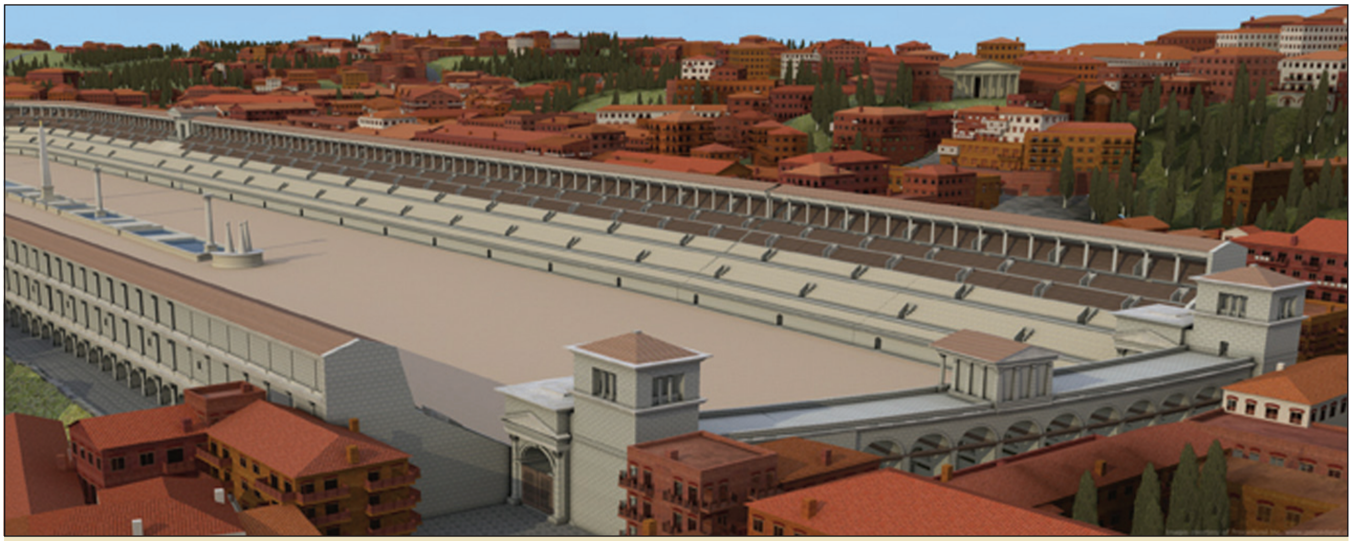
> ***"Archaeology's not a treasure hunt. Archaeology is a knowledge hunt."***
>
> *—Bernard Frischer, Director, Institute for Advanced Technology, University of Virginia*

The Internet is a vast resource for generating revenue, and few countries are better situated to realize that potential than heavily wired Israel. From websites and games to merchandise and tourism, Israel's history needs to jump into the marketing medium of the moment. For example, a website could be created around Roman archaeological sites in Israel that would link sites like Masada and Caesarea with smaller sites like Megiddo. The popularity of the larger sites would drive viewer traffic to the lesser-known archaeological sites. These websites, acting as virtual bridges between the potential tourists at home on their computers and the real sites, could also be linked to websites like Travelocity or Hotels.com. Increasing the ease with which a consumer can both learn about the archaeological sites and book travel services could dramatically increase revenue. The websites could build income for the IAA and the NPA by increasing both the quality and quantity of tourism to physical sites, as well. Sources of capital could vary from commissions from online booking and banner ads on the websites themselves to online gift shops, where local artisans could sell their wares to a larger audience. All of this could be recycled back to maintenance and development at the actual archaeological sites themselves.

The emerging digital information pipeline can build off of archaeological fieldwork through a 3-D data capture of the sites and historical analysis to create publications, on-site theater, mobile tourism, web content, and other commercial uses of the intellectual assets.

These revenue-generating assets focus on interpretation and sharing knowledge about cultural heritage. This intellectual property could be tied with next-generation, image-recognition software on smartphones and other GPS-enabled devices, which would increase the value and experience of tourists visiting Israel. And given Israel's competitive advantage when it comes to high-tech development, this would leverage the increased interest in cultural history to generate economic growth and development. Other commercial uses could include 2-D and 3-D prints for souvenirs and teaching aids, video assets for documentary and educational websites, and virtual-reality set assets for feature-length films and video games.

During the Lab, participant Bernard Frischer of the University of Virginia presented his project, "Rome Reborn," an educational program and video game that instructs and entertains. Frischer built a compelling case for the uses of historical reconstructions of cities and archaeological sites, as demonstrated through his remarkable digitization of ancient Rome. This, he says, could be done for Jerusalem and other sites. Rebranding "Ancient Israel" and other periods of the country's history as the backdrop for video games and Internet sites could change international perspectives on history.



Source: Past Perfect Productions.

The Circus Maximus has been digitally restored to its full glory, in Rome Reborn 2.0, an educational video game that allows viewers to walk the streets of Rome and experience life as it was in ancient times.

Participants mentioned the use of a UNESCO brand, either on-site or online to better market the nine sites that have received the World Heritage Site designation. One participant discussed the grouping of these sites together on one interactive website, not as an academic listing of the sites, as has been done, but instead an interactive marketing tool that could sell or create links to other sites selling souvenirs, guidebooks, and other memorabilia. Currently, remarkably, there is very little technological infrastructure for promoting any archaeological activity online in Israel.

Conclusion

As tourists from around the world fill the narrow corridors of Jerusalem's Old City, purchasing everything from replicas of ancient oil lamps and aromatic spices to Arabic sweets, they are walking in the footsteps of millions who have treaded these same paths over the past millennia. To ensure that the stones and archways remain for millennia to come, Israel must pay greater attention to valuing, financing, and preserving its cultural heritage.

Across the archaeological value chain, there are funding gaps, "valleys of death," that make preservation nearly impossible. The Financial Innovations Lab identified an array of tools, as well as policy and program options that can be mobilized to conserve cultural heritage in Israel.

From public support through grants and guarantees to private investment in venture capital funds and project finance, economic models exist that can increase current funding to the levels needed to support real preservation. As the prime minister's office makes the survival of Israel's cultural heritage a national priority, there is a renewed effort to promote the idea of integrating archaeological conservation and local economic development in the near term.

Above all, in understanding culture as a natural resource, as essential as earth, wind, or water, its true value can be realized and deployed to enable job creation and growth for the entire country.

Appendix I

Financial Innovations Lab Participants

(Affiliations at time of Lab)

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City of David archaeological site

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The Israel Museum

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Leora Sonnenblick
Donor Relations Coordinator
Ir David Foundation

Ze'ev Temkin
Chief Architect
TIK Projects

Naomi Tsur
Deputy Mayor
Jerusalem Municipality

Yossi Werzberger
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Milken Institute

Noah Yago
Principal
Jerusalem Ventures Partners

Danny Zborover
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University of California, Los Angeles

Steven Zecher
Principal
Strategy Partner

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CULTURAL HERITAGE AS AN ECONOMIC DEVELOPMENT RESOURCE IN ISRAEL

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