

FOCUS SCIENCE AND CULTURE

Taking centre stage

European Capitals of Culture are embracing the contribution of science

Mičo Tatalović

Science is not just a part of contemporary life, Paolo Verri believes. It's the central pillar.

"Science and technology are the bases of contemporary culture," Verri, director of the European Capital of Culture 2019 activities in Matera, Italy, told Research Europe. "Unfortunately, in southern Europe, this concept is still not very developed, and we want to try to fill this gap."

Matera (pictured, left) and the Bulgarian city Plovdiv (pictured, right) are joint European Capitals of Culture this year, following about 60 cities that have carried the title since the European Commission launched the scheme in 1985.

The culture capitals are increasingly incorporating science into their programmes, and linking up with universities to deliver a mix of art, science and development.

One of Matera's five themes this year is "ancient future", reflecting on humanity's relationship with space and the stars. It includes events at the Space Geodesy Centre, which Verri sees as the antithesis of the city's poverty-ridden history: a symbol of a brighter future driven by science and technology. "The Space Geodesy Centre is a place at the forefront of research both nationally and in Europe, but it is also a symbolic place," he says.

Matera2019's cultural programme also includes a celebration of the city's famous resident Pythagoras and the beauty of mathematics. "Pythagoras testifies that science and mathematics play a leading role in western culture," says Verri. "We want to rediscover this root of our culture."

The organisers of Matera2019 want its legacy to be an increase in the number of young people studying at its growing local university, with which they have strong links. "Science is central to our story," says Verri.

This science focus has attracted the attention of Italy's national research centre, Consiglio Nazionale delle Ricerche, which has begun working with Matera to organise a conference on culture and innovation in engineering, architecture and digital technologies to help develop models for



LEFT: RENZO FERMO, VIA PIXABAY; RIGHT: JUAN ANTONIO SEGAL (CC BY 2.0), VIA FLICKR

the economic revival of southern Italy.

That might seem like an ambitious goal, but there is evidence that boosting culture and creativity can help cities to thrive economically. Data gathered by the Commission's Joint Research Centre through its Cultural and Creative Cities Monitor project shows that arts, culture and the creative sectors contribute to urban development and resilience, boosting their GDP, according to a Commission spokesperson.

Plovdiv, this year's other capital of culture, is dabbling in science too.

"Science is art at its core and to differentiate them for an artistic project would be unnatural," says Gina Kafedzhian, deputy programme director for Plovdiv2019. "Scientists, the scientific approach and learning processes have been an integral part of both the creation of the bid ideas and, after that, the implementation of the ideas into a real programme."

Plovdiv2019's lineup includes more than 300 projects and nearly 500 events that challenge preconceived notions of the purpose and character of art, and that celebrate the creative process of discovery, learning and sharing, says Kafedzhian.

Among them is *The Long Way to the Stars*,

a play written by a university physics professor that presents recent scientific discoveries about the origin of life and the solar system. "The performance delves into scientific news as well as philosophical questions from the world of the modern-day discipline of astrobiology," Kafedzhian says.

The programme also includes *Mathematic Core of Art*, an exploration of the intersections between mathematics and art; 2019, *A Year of the Future*, which looks at the idea of a cosmic future and the achievements of Bulgarian space studies through exhibitions, lectures and meetings with scientists; and *Adopting Adata*, an effort to use natural materials, environmental monitoring and 'green art' as tools to integrate the Maritsa River and Adata Island into daily life in Plovdiv.

Empowerment through knowledge

The organisers hope these activities will boost curiosity and help empower people. "The value is deeper knowledge, broadened access to information, and the responsibility which knowledge brings," says Kafedzhian.

The inclusion of science comes as no surprise to many in the European community.

"Science is an important element in today's societies across the EU. It is therefore no



“Science can help artists and cultural workers create interesting ways of interpreting social issues and human experiences.”

Renato Stankovic, coordinator of the multidisciplinary R&D centre DeltaLab at the University of Rijeka, Croatia

coincidence that some cities use their year as European Capital of Culture to reflect—through cultural means—on how science can shape the present and future lives of their inhabitants and communities,” says a Commission spokesperson.

Previous capitals of culture have taken a similar approach. In 2001, Porto in Portugal paired artists with scientific sites to produce installations; in 2004, Genoa in Italy included a Festival of Science in its cultural programme; Linz in Austria had a Kepler Salon in 2009 showcasing sciences and the interface between research and daily working life; and 2015 culture capital Mons in Belgium focused on building bridges between art and new technologies.

The trend looks set to continue. In 2020, Rijeka in Croatia and Galway in Ireland are sharing the title.

One of the main projects in Galway will be Aerial/Sparks, examining radio technology as a means to explore ocean landscapes. Artists from Ireland and the rest of Europe have been invited to develop new work from the experience of spending time at sea on research surveys carried out by the Marine Institute research vessel Celtic Explorer, which was designed for fisheries acoustic research.

The organisers of Rijeka2020 see it as an opportunity to transform this post-industrial port city through sustainable development, creative industries and green technologies. They have partnered with the University of Rijeka to create a new multidisciplinary R&D centre, DeltaLab.

“We at DeltaLab believe that cultural programmes can be a great way of introducing science to general audiences,” says Renato Stankovic, DeltaLab’s coordinator. “But it can also work vice versa; science, especially new technologies and innovations, can help artists and cultural workers create interesting ways of interpreting social issues and human experiences.”

The European Capital of Culture contributed funding for the lab but also created a reason for the various different actors—city departments,

*Capitals of culture

European Capitals of Culture are an EU project introduced in 1985 to bring “fresh life” to cities by boosting their cultural, social and economic development. Cities must bid for the honour by proposing a forward-looking cultural programme for evaluation.

The award brings media attention that, together with the programme, can increase tourism, although the focus is intended to be on residents. A conditional financial award of €1.5 million accompanies the prize if evaluators are satisfied that the capital is following through on its plans. The European Commission says that budgets for recent programmes have ranged from €20m to €100m, but that investments have brought six-fold returns for the local economy in some instances.

Bids are evaluated against six criteria, including their contribution to a long-term cultural strategy and their European dimension.

Every third year, a capital from a non-EU country is chosen.

non-governmental organisations, small companies, public institutions and university departments—to meet, discuss and work together on affordable, local solutions. “This was not the case before, at least not on this scale,” says Stankovic.

Looking further ahead, in 2022, Esch-sur-Alzette in Luxembourg will have a Remix Nature theme focused on reclaiming post-industrial mining and steel factory areas for biodiversity, says Christian Mosar, artistic director for the event. The organisers want the region to be recognised as a biosphere reserve through Unesco’s Man and the Biosphere Programme.

“There will also be a whole series of new research projects,” he says. They will focus on sociological and historical issues, as well as digital media, and be carried out in collaboration with the Luxembourg Centre for Contemporary and Digital History (C²DH) at the University of Luxembourg.

In 2023, Veszprém in Hungary is planning travelling start-up labs; an interactive IT knowledge centre; an exhibition space called the Cube—“a real hub for creation and exploration of the new dimensions offered by the latest technologies”; and a School for Planet at the zoo that will be dedicated to the complicated relationship between humans and ecosystems, exploring climate change, species extinction and pollution.

It also promises to organise Erasmus meet-ups for students; Balaton Talks—a lakeside platform for discussions between important public intellectuals, thinkers and specialists; and an interactive play, The Magnificent Seven, that will confront the “demons threatening Europe” such as artificial intelligence and climate change. “We have many projects indeed that are focusing on science or the use of science in arts,” says Friderika Mike, Veszprém2023’s director of programme development and foreign relations.

For Europe at least, cultural capitals are now incomplete without science. *

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