Design Parameters of Science City:

The design ideas in the submitted projects were asked to respond to a number of complex parameters:

- The project should be suitable to **implementation in phases**, in a series of steps in which the completed part (or building in the case of several buildings) should be usable for the public when it is completed, but conceived in such a way that the entire complex, when completed, produces an effect where the whole is more than the sum of the parts. It is expected that the project should allow for implementation in three phases of about 20-40,000 sq.m. each.
- The complex should become a **landmark** for 6th of October City and celebrate the rebirth of science in 21st century Egypt.
- The building(s) should themselves be "green buildings" where the building itself is an exhibit that demonstrates how **environmental concerns** can be integrated in the design and not be considered an add-on to a conventional building.
- The building(s) should be **flexible** in their internal use, adaptable to the new and rapidly evolving technologies of interactive displays and learning environments, both virtual and real, as well as allowing for interaction between the public and the staff.
- The facility should **cater to all age** groups.

In short, the winning project should be one that creates a place for discovery, open to all, and which provides fertile ground for reflection, curiosity and participation. It should be a place that invites both workers and visitors to live, share and enjoy the experience of being in such an interesting space. The configuration of spaces must be capable of evolving with the technologies, the questions and the progress of science.

The site should be landscaped so that at each stage of implementation, the link between building(s) and land should be conceived of in an inviting and dramatic way that allows for the interaction between the indoor and outdoor spaces in articulated ways, and allows visitors to use pedestrian walkways to explore the landscaping. Such walkways may be reduced or changed as more buildings are

implemented and the complex grows and densifies. The landscape design should also allow for functional uses such as parking and service facilities.

The project design should create a set of buildings and spaces that must be inspiring from the outside and motivating and exciting from the inside to visitor and resident worker alike. It must be imbued with a particular vision of what the search for knowledge and the pursuit of science is all about. That philosophy was articulated in the Brief for the competition, and the key elements of that statement are attached as an Annex to this report. (see **Annex 1**).

The rules of the competition specified four winners and four honorable mentions.

The Winning Projects:

First Prize: Project Number 026-XQ7439:

This project was the one that best responded to the challenges of the brief. The design is subtle but rich. It involves various levels of planning. It displays a blending of aspects of several of the "types" that were so visible: the circle, the striation, the berm (or dune), the legible apparatus of sustainable performance, the complex of courtyards, the oasis, etc. But the overall impact is one of a unified composition of great elegance and finesse.

The project feels very much of its place and has the potential to be quite beautiful and to produce a rich series of working, display, and learning environments. The basic scheme and concept of the architectural design (the *parti*) was impressive, the organization sound, the phasing logical, the environmental performance promising, and the image very strong but without needless grandiosity.

Though organized in a circular form, the project can be accomplished in three stages, with the staging starting from the central section and growing as wings. Thus it provides a design solution to the phasing problem which the jury considered a rational and workable idea.

The Project enjoys a multitude of umbrella-like circular canopies of various sizes, supported by single columns, providing a symbolic "column-scape" and an upper

Fourth Prize: Project Number 005-GS9810:

A well worked out scheme which produces a straightforward project that fulfills the criteria of the brief. The clear geometry based on a simple "nine square" scheme enables the easy phasing of the project. The central element of the project, twisted tower structure provides a symbolic beacon which can be seen from afar. The landscape surrounding the building allows the visitor to participate in the viewing of outdoor installations related to the sciences.

Honorable Mentions:

Honorable Mention: Project Number 020-AN6343:

This project's concept of a series of inverted pyramidal forms simultaneously provides a diversity of shaded external spaces and internal exhibition rooms. The visitor can enjoy many of the buildings' outdoor spaces and gardens without entering the museum proper. The use of modular construction gives a great deal of flexibility for the staging of the construction process, while the expression of angularity and the rough treatment of surfaces brings a commendable strength of form which gives the project the potential of being iconic.

Honorable Mention: Project Number 034-NP7215:

This project has circular rings as the basis of the plan where various functional floors are designed gravitating towards the center. That center provides a grand plaza where all the activities come together. The overall shape has a certain affinity with the Library of Alexandria building in providing a dramatic enclosure for a series of platforms within it (not to mention a freestanding planetarium). The design is flexible, containing a dramatic centralized place of gathering, and fostering continuity and intercommunication among the functions gathered.

While the autonomy of the overall shape may to some degree make the phasing of the scheme more difficult, the sectional exploration of this design nevertheless shows the possibility of its use in a series of fragments and as part of a singular

schema. It is a very clear and inspirational design, while remaining conventional in a way that offers grandeur without weirdness.

Honorable Mention: Project Number 014-MM4891:

A project of deceptive simplicity in terms of geometry which retains an elemental beauty through the clarity of the forms, and the hard-edged architecture. The brief has been dispersed into individual pavilions / buildings. Blind-walled boxes with walkways on four sides create curiosity and mystique by their inscrutability from the outside. These buildings despite the similarity of their external form provide extremely diverse functional and experiential conditions to be discovered as one enters each square to explore the contents of that building. The interior spaces repay attention and enable reflection. The overall design can be easily parsed into stages of construction.

Honorable Mention: Project 049-ST2347:

This design is recognized for its conceptual clarity and the logic of its execution. A series of buildings of various sizes and orientations are placed around a central outdoor space. This space, which contains the observation tower, also acts as the organizing element of the project. A canopy is used to unify the different elements and to connect the covered area to the sky through a series of openings. There is an evident refinement in the architectural handling of the relationships within the overall designs.

The simplicity of the plan with all functions organized in the form of pavilions around a linear spine, gives a project that offers a very realistic solution that can be easily phased in its construction.

Conclusions:

The Members of the jury wish to record their thanks to the Management of the Library of Alexandria and the technical team that has organized this competition. The procedures were rigorous and transparent and followed the rules and best practices of UIA competitions.

The Jury recommends that the Library of Alexandria should enter into a dialogue with the winner of the competition to elaborate the details of the design and the phasing of the winning project.

Ismail Serageldin, Chairman _____ 28/8/16

Nikos Fintikakis, UIA representative _____ 24/08/2016

Annex 1:
On the Content and the Philosophy of "Science City"

Humans interact with each other and with nature… Since the earliest times they have explored the limitless universe, the inner self and the subtlety and complexity of interactions from social relations to the web of life. They express these explorations in ways that we have come to call Art or Science. But exploration is at the root of being human from our youngest years to the winter of our lives.

That part of these explorations that we call "science" is part of an enterprise by which we not only gain knowledge about nature, but also by which we organize our knowledge in such a way that it commands more of the hidden potential in nature. Science is driven by curiosity about the natural world and the inner self. It is empirical, rational and logical. It is about the joy of discovery and the delight of understanding.

Technology is the utilitarian application of Science. It may precede science, as it did in olden times, in that people used tools and levers, because they demonstrably work, without having understood the scientific principles that underlie them. More recently, technology has been following science as new scientific insights open the door for new technologies. These in turn encourage even more research and the enterprise which we call "Research and Development" or R&D has been a powerful engine of progress throughout the 20th century.

Science City celebrates the scientific enterprise with its exhilarating and unending journey of discovery, and promotes the "Culture of Science". It is a place where we honor the past, celebrate the present and invent the future. It helps our society at large, as well as its national and foreign visitors gain insights in and an appreciation of a culture of science, which is more than a widespread knowledge of scientific facts and figures. It is about acquiring a skeptical outlook, and as well as promoting evidence-based regulation of human social activities and interactions. This is undergirded by the values of science: honoring the search for truth, recognizing the contributions of others, retaining openness to the contrarian view, promoting rationality and adhering to logic and evidence to arbitrate disputes. A society whose culture is permeated by a culture of science is one where the public discourse manifests these qualities.

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The scientific method is central to the enterprise of science. Without it there can be no real R&D, no technologies. It is a necessity, not a luxury. Our younger generations must become producers of knowledge, not just consumers of technology. The enormous benefits of science and technology will not accrue to those who will not allow tolerance of the contrarian view to flourish, and allow the scientists of tomorrow to make their contribution to creating a better future for all.

In thinking about how to design the buildings that will constitute "Science City" competitors should reflect on the changed and changing outlook of science. The classical definitions of natural sciences include:

- The Physical Sciences: Physics, Chemistry
- The Life Sciences: Biology (zoology, botany)
- The Earth Sciences: Geology, Astronomy, Meteorology

These classical definitions, that functioned much as separate silos for a long part of the last two centuries, have been severely challenged in the last half century. Increasingly, discoveries have come about in the overlapping domains of science: Biochemistry, Paleontology, Molecular Genetics… to name but a few. Today we are witnessing another enormous convergence among the domains of bio-info-nano-technologies that prompts joint exploration and experimentation between these hitherto separate fields.

Furthermore, we are increasingly adopting a changed outlook, relying on process and system views, rather than isolated events or "snapshots". Take, for example, photosynthesis. It is now seen as drawing on the different scientific disciplines in different ways. Thus:

- light: the energy source (physics)
- photosynthesis: the food production process (chemistry)
- for plants (biology)

Energy…biochemical pathways…cell Biology… plant physiology… all interact to increase our knowledge of nature and nature's ways. Complexity and Chaos are part of the system and can be dominant characteristics of what we confront in certain areas. Furthermore, we are moving from creating collections of data (or specimens) to creating connections between separate collections of data or specimens.

The domains have blurred: we look at the mathematics that underlie music, and study the brain to understand the mind. Neurology and psychiatry are seen to be different ways of looking at that most fundamental part of ourselves: our brain. Computational linguistics and literary criticism seek greater understanding of language, its uses and the messages that it carries.

Even as we write or read these lines, new technologies for presentation and communication are being developed. The pace of change is enormous. Thus the fact that Science City will have to be built in stages becomes useful as it allows for changes in the museology or format of the exhibition and interactive learning parts of the building to be updated with new possibilities from building to building during the life of the execution of the campus.

Against that background, it becomes clear why this is primarily an ideas competition rather than one that holds designers against a specific program that gives detailed requirements in terms of numbers of rooms in each facility and the size of each type of room and its intended use.

SCIENCE CITY
International
Architectural
Competition

BIBLIOTHECA ALEXANDRINA
مكتبة الإسكندرية

uia

International Competition for a Comprehensive Master Plan & Architectural Design of THE SCIENCE CITY in the 6th of October City Giza, Egypt

Final Results

Prize		Code
The first winner prize	USD **110,000**	026-XQ7439
The second rank prize	USD **70,000**	007-NP1128
The **third** rank prize	USD **40,000**	013-BA0816
The **fourth** rank prize	USD **20,000**	005-GS9810

Honorable Mention

Prize		Code
Mention Prize	USD **5,000**	020-AN6343
Mention Prize	USD **5,000**	034-NP7215
Mention Prize	USD **5,000**	014-MM4891
Mention Prize	USD **5,000**	049-ST2347

In addition to a sum of USD 3,000 which will be given to each of the 8 awardees.

Signed by the jury:

- Seif Allah A. Alnaga
- Nikos Fintikakis
- Suha Ozkan
- Mohsen Mostafavi
- Claudie Haignere
- Michael Sorkin
- Ismail Serageldin (Chair)

Signed on

Date

SCIENCE CITY
International
Architectural
Competition

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Jury Report
on the
Science City Competition

Introduction:

The Library of Alexandria organized an international architectural competition for a new complex called "Science City" which is to be built on the western edge of Cairo, in the heart of the 6th of October City. This new complex, to be placed on prime land calls for inspiring new ideas that will ultimately create the first 21st century science museum, learning and research facility in Egypt. The Competition was organized under the standard rules of the UIA and generated substantial local and international attention. 349 architects from 45 countries registered and paid the nominal registration fee, and of these, 142 projects were effectively submitted from 32 countries. These 142 projects constituted the projects that were evaluated by the Jury.

The projects were all displayed physically in the same space to allow the jury to review each project separately and to compare projects as they saw fit. In addition, digital versions of the material were available for projection for recall as the jury discussed around the table. Many of the projects attained a high level of resolution. In general, the schemes tended to fall into certain typologies: the circle, the striation, the berm (or dune), the legible apparatus of sustainable performance, the complex of courtyards, the oasis, the village of buildings around an organizing central space, etc. The Jury believes that the selection of a first prize and three additional winners plus four honorable mentions show a wide range of possible solutions to the design challenge. However, the decisions were motivated by the intrinsic qualities of each project, and the Jury was unanimous in its choice and ranking.

The Jury arrived at a unanimous decision which is described in this report. The Jury's comments are grouped into three parts:

- Reflections on the brief that the projects were responding to;
- The winning projects; and
- Honorable mentions.