



TALENT ACADEMY

InAVation Awards – 2017



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1. GENERAL DESCRIPTION OF THE PROJECT

BRIEF DESCRIPTION OF THE OBJECT

Kamenny Island Palace is a prominent monument to classicism dating back to the times of Catherine II of Russia. The monument is located in Saint Petersburg. Built in 1780, the palace became the favorite residence of Alexander I, Emperor of Russia. There are numerous stories and myths about Kamenny Island Palace. Legend has it that this was exactly the place to which the Bronze Horseman arrived at a gallop after learning that Alexander I, fearing the approach of the French army, was going to move the monument out of the city of Saint Petersburg. Then, bronze Peter said that as long as he stood at his spot, nothing would happen to the city.

However, it is known for certain that the walls of the palace witnessed more than one historical event: the appointment of Mikhail Kutuzov as Commander-in-Chief of Imperial Russian Army, the opening of a center of painting during the times of Grand Duchess Elena Pavlovna, and music evenings, which were hosted by a composer Rubinshtein...

Nowadays, the Kamenny Island Palace is a historical and cultural heritage site protected by UNESCO.





In 2014, it was decided to create the Talent Academy for children and the youth of Saint Petersburg. The Talent Academy was meant to be created inside the palace as an educational area that is unique among other educational institutions.

On the 14th of December 2015, the Talent Academy was opened in Kamenny Island Palace. The concept of the project was developed by the Committee on Education of Saint Petersburg in close collaboration with the Polymedia company in order to provide the youth with an area for unrestricted creative outlet and vocational guidance. Kronstadt Group took part in equipping the Academy with multimedia solutions as well.

The following people took part in the solemn ceremony of opening the new educational institution: Governor Georgy Poltavchenko, Vice-Governor Vladimir Kirillov, Chairman of Committee on Education Zhanna Vorobyova, Talent Academy CEO Darya Andrianova, as well as Polymedia CEO Elena Novikova and President of Kronstadt Group Nikolay Lebedev.

2. GOALS, TASKS, AND THE PURPOSE OF THE PROJECT

- Creation of an area for unrestricted self-realization of the creative youth. This will allow to reveal talents and assist in selecting one's future vocation.
- Naturally blending in modern technologies into the classic interiors of the palace with no damage to the architecture of the building.



3. REQUIREMENTS AND CUSTOMER FEEDBACK

The management team of the Academy aspired to implement technological content of the education of the future into the new institution and expected creative ideas from the main contractor, but at the same time, it limited the flight of fancy by the requirement of leaving the walls of the palace untouched, as the palace is of great historical and architectural value. It was important for the customer to combine modern technology seamlessly with the classical interior of the palace of the XVIII century.

FEEDBACK

"The Talent Academy does not cull gifted schoolchildren; it helps to discover talent in each young resident of Saint Petersburg. It is a matter of talents that are constituent part of other talents and an integral part of success in life. Talent, as we understand it, can be expressed with the formula of passion + diligence. Science, as part of culture, has a special place in the area of interest of the Talent Academy. This is the reason that the palace is equipped with up-to-date technology, some of which is unique, that the Center of Recreational Sciences has been created, and that the educational process of the Academy is organized in the way that the "beacon" and "sail" of the process are an interest, curiosity, joy, and play like natural space of life of a teenager in any times.

We are glad that such a talented and experienced integrator as the Polymedia company participated in the project of creation of our Academy. The company offered its own innovative approach to the creation of a concept of technical equipment that is responsible for achieving the main goal of the project, which is providing an area of unrestricted creative outlet and vocational guidance for the youth. Engineers of the company have managed to blend in high-technology equipment seamlessly into the space of the Talent Academy and not to violate the original design, interior, and architectural solution of Kamenny Island Palace.

We thank everyone for his collaboration, and we are open to other even more innovative joint projects!"

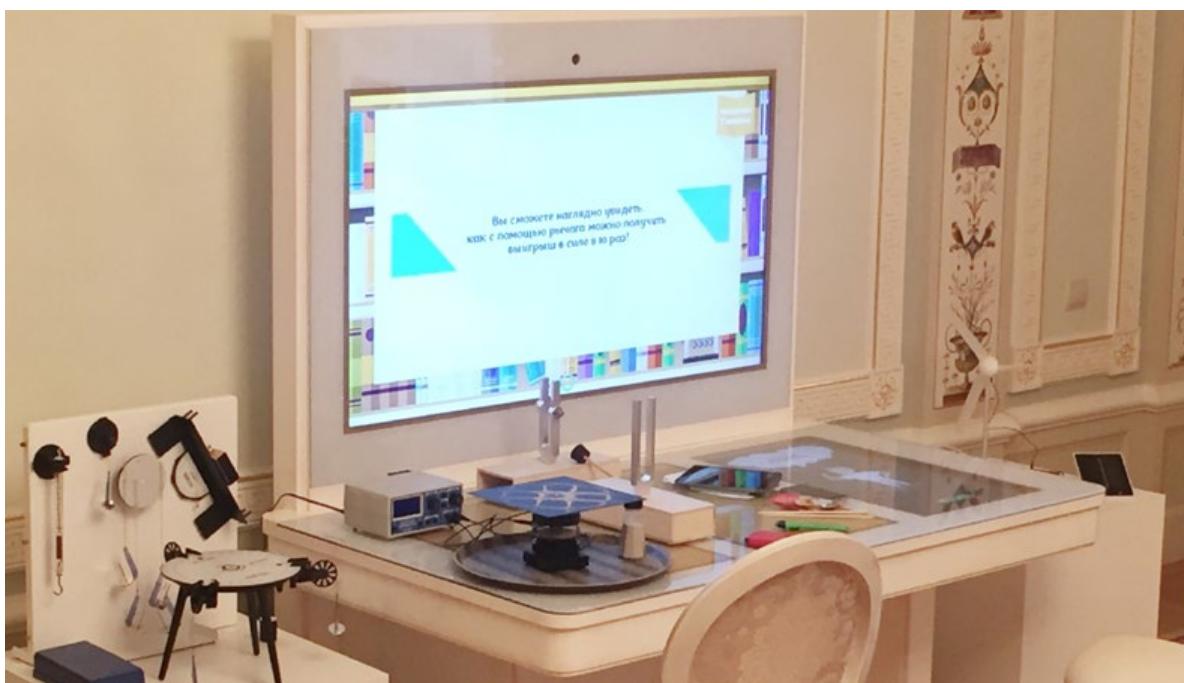
Darya Andrianova,
Former CEO of Talent Academy, State Budget-Funded Atypical Educational Institution



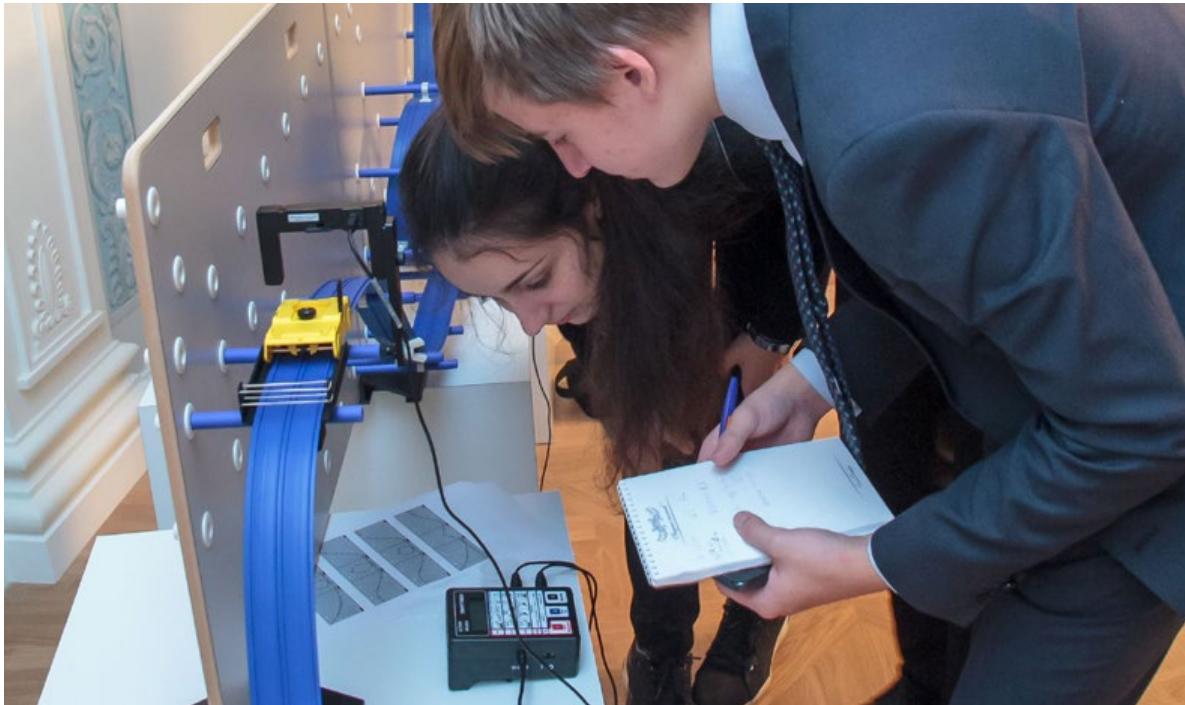
4. DESCRIPTION OF THE CREATIVE AND SCIENTIFIC AND EDUCATIONAL AREAS

Educational programs at the Academy provide for profound study for humanities, technical and natural sciences, as well as creative classes and vocational guidance practices. Together with teachers, schoolchildren can master teamwork, gain research skills, carry out individual projects, as well as try their hands in working on social initiatives of district, city, and even global levels. The space of the palace is divided into five creative and scientific and educational areas in order to develop a wide variety of abilities in the visitors of the Academy.

THE CENTER OF STEM



The Center utilizes the “Educating with passion” principle to carry out combined development programs. The Center is equipped with unique laboratory sets and installations for physics, chemistry, biology, geography, and ecology, which allows schoolchildren to conduct comprehensive researches and make their own discoveries.

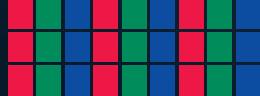


The Center of STEM is symbolically separated into theme halls. Each area is equipped with PASCO laboratory sets to conduct experiments in physics, chemistry, biology, geography, and ecology. Studying a layout of bridges and how a gyroscope works, finding the power of impulse by using a special platform, or, for example, recreating the conditions for cloud formation are all available to each schoolchild, who can not only imprint the theory from the school program into his mind but also model a natural phenomenon or a process as well as understand how objects and phenomena work.

Young visitors can conduct scientific experiments with the help of PASCO laboratory tools.

There are nine interactive tables that are fit for conducting laboratory researches.

Polymedia has developed and implemented scenarios for demonstrating and conducting experiments with the help of PASCO laboratory equipment. The methodical service of the company faced a complex task of going out of the boundaries of the school program and preparing memorable and engaging experiments that cover the subjects of the natural science series while preserving the educational component. In collaboration with teacher-practitioners, Polymedia methodists have developed 32 unique scenarios for demonstrating and conducting experiments for each PASCO installation. Schoolchildren can conduct their experiment, become familiar with the findings of scientists, make their own conclusions, and learn interesting facts about the phenomenon. After conducting each experiment, quiz questions need to be answered to imprint the gained knowledge while playing a game.



The table is equipped with special software and specially developed interactive lessons by Polymedia.



An interactive table with digital laboratories harmoniously embedded in the interior of the palace.



THE CONCERT AND THEATER CENTER



Kamenny Island Palace is also a site for presenting concerts, recitals, and theatrical plays.

The equipment of the Center:

- Bose portable PA systems;
- a mixer to connect sound sources;
- a set of wireless microphones and lighting equipment from Robe.



THE CENTER OF INTELLECTUAL GAMES



At the Center, schoolchildren develop various mnemonics and techniques for creative thinking by playing the roles of experts of famous television game shows and by participating in intellectual adventures and cognitive-training city championships.

For that purpose, the Center is equipped with a whole big interactive solution with various means of visualization.

The interactive table of the host is capable of showing a software user interface to play one of the following games: SmartheadsWhat? Where? When? Brain RingJeopardy!

Depending upon the hosted game, the LCD panel, which is the screen for the participants and audience, shows a certain user interface with a score and questions for the game. The software supports updates for the question database. For each game, the questions can be picked randomly, taking into account the age of the participants and the topic of the game.





THE CENTER OF PROJECT ACTIVITIES



The Center of Project Activities is intended for costume parties, festivities, time travel, scientific immersion, and role-playing games.

Owing to the technological system of displaying information, conference system, and video-conference communication, the Center becomes a contemporary area for meetings and active discussions between schoolchildren and scientists, actors, musicians, athletes, and politicians. Students can study in several sections of the Center of Project Activities: in the conference hall and coworking space.

The coworking space has been created especially for creative collaborative activities.

A large interactive video wall that consists of four LCD panels allows to open images, videos, and PDF documents; add visual comments; and save notes. The video wall fulfills the function of a shared workspace that assists in discussing creative projects.

The coworking space is also equipped with a smart Flipbox display. The conference hall is equipped with an LCD panel that supports image input from notebooks, wireless voice amplification conference system to increase the overall volume of discussions, and Lifesize video conference communication, which is capable of connecting participants with famous people not only from Saint Petersburg but from any city of Russia.



THE CLASSROOM OF A NEW FORMAT



Within the Academy, there is an educational multimedia class that is designed for interactive programs, presentations, and video-content broadcast.

The class utilizes educational material on history, astronomy, and military-patriotic education. A lifelike display, electronic quizzes, and a surround-sound system transform the educational process into a journey with elements of virtual reality.





THE MEDIA CENTER OR THE STUDIO OF VISUAL ARTS



The Media Center is equipped with a virtual studio, a set of professional video cameras, lighting equipment, and up-to-date video-editing workstations. Television journalism, camera work, film editing, photography, and animation are offered to the students of the Academy who can test themselves in each of these areas and decide whether it is for their liking, hone their mastery in the Studio of Visual Arts, and walk towards the dream after a vocation has been chosen.

Owing to up-to-date technical equipment of the studio, the students are capable of quickly mastering technologies and win awards and prizes in contests and at festivals. One of the latest examples is a Festival of Mobile Cinema in the Pushkin city. The students brought seven awards back to the Talent Academy. The team of the Studio of Visual Arts took first place in the Best Live-Action Film and Best Music Video nominations. Other nominations: Best Scenario, Best Cameraman, and Best Actor.



THE MUSEUM OR THE STUDIO OF THE PALACE GUARDIANS



Kamenny Island Palace, which houses the Talent Academy, is one of the most interesting objects of the cultural heritage of the city. Crowned and eminent owners of the palace have populated it with mysterious characters, created interesting traditions, left a multitude of unsolved mysteries, gave legends to the city, and bequeathed to keep the palace safe, tell the city about it, and recall the traditions and create new ones. This is with what the Palace Guardians are tasked. The Studio of the Palace Guardians is created for those students who love history. In the Studio, the schoolchildren work with archives, become absorbed with studying the era when the palace was inhabited by Emperor Alexander I or the Grand Duchess Elena Pavlovna, consolidate all of the historical facts, and tell the facts to their peers.



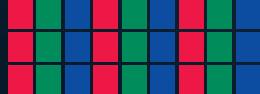
Virtual fitting room



Talking Palace Guardians

EQUIPMENT OF THE STUDIO

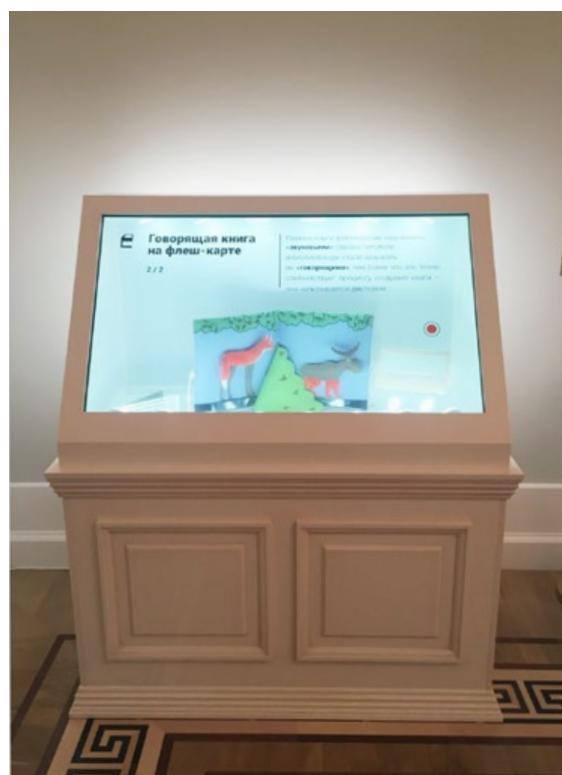
With the help of an LCD panel and MS Kinect located in the Studio of the Palace Guardians, a virtual fitting room has been created, where visitors can try on historical costumes, take pictures, and send them to their e-mail addresses. However, this is not the end of a journey into history. The gallery of live images will impress even those who are not interested in history. A live image is an LCD panel in a framing that has a Web camera installed in the upper part of it. The display shows a portrait of a historical figure, while the Web camera has a motion sensor. When a visitor approaches the picture, the figure goes live and tells a short story about himself.



THE EXHIBITION CENTER



The Exhibition Center of the palace is equipped with virtual museum showcases. A special showcase construction allows to see the exhibit itself as well as an image shown on a screen. This is achieved on account of the exhibits being installed inside of a box that has the frontal wall made of a transparent LCD. The image that is displayed upon the screen can be controlled by a network player.



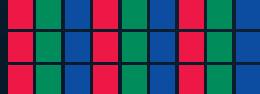


THE HOLOGRAPHIC THEATER



Every visitor of the unique Holographic Theater of the Talent Academy can try out the profession of an actor. The Theater puts on performances amidst real stage decorations with virtual characters as participants. The most effective theater performances occur when the actor on stage interacts with a projected opponent, engaging in a virtual dialogue or embarking on a journey that explores historical events.



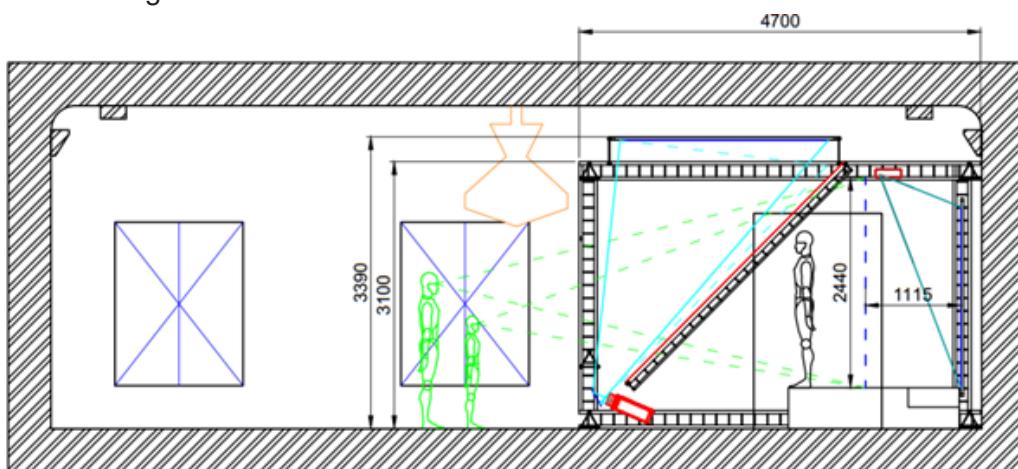


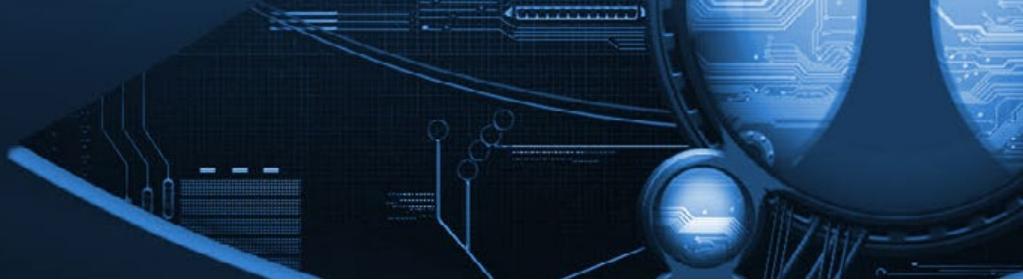
The design of the holographic theater is a parallelepiped with a square base of 4.7 m, the height of the parallelepiped is 3.4 meters. A complicated task that was put before the company's engineers was to select a room for the Theater and to embed the design in the Palace interiors strictly protected because of their historical value.

It was decided to place the holographic theater in a room that used to be called "sea interior". The room was perfect to accommodate 20 seats and to make an absolutely dark interior.



The Holographic Theater has two planes for the image formation. The first is the back wall, on which the image is projected. This screen plays the role of virtual scenery and complements the image that is projected onto a special transparent screen disposed at an angle of 45 degrees. The image on this screen is like floating in the air, thus creating the effect of the hologram.





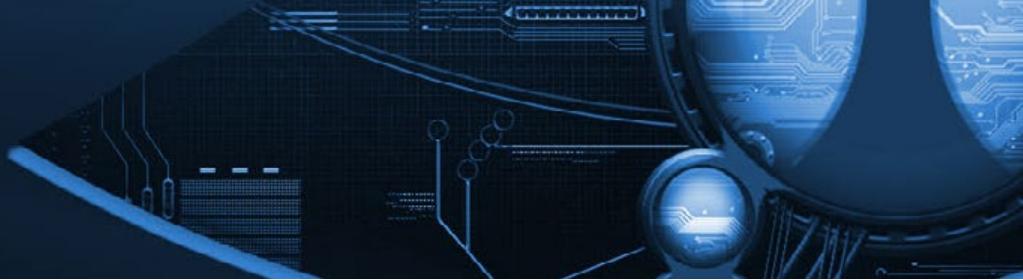
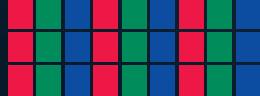
Between the transparent screen and the back wall is the stage on which can be placed additional props and actors involved in the play.

During the performance the real objects and actors are immersed in virtual scenery and interact with virtual characters – this produces an impression of a realistic picture.



Before the celebration of Christmas and New Year Polymedia has developed several ideas for the Holographic Theater performances. These are the stories about the traditions of celebrating the New Year and Christmas in Czarist Russia, History of the Kamennoostrovsky Palace (literal translation: “Stone Island Palace”), Stone Island’s villas Tour.

New technologies have inspired the children to create a film about the Holographic Theater. This film created by the Academy of talents’ studio, was awarded on the All-Russian contest.



THE CENTER OF DIGITAL MUSIC



In the Center of Digital Music, students are learning to record sets and control high, medium, and low frequencies. Young DJs master the skills of track speed control. Owing to the inclusion of an electroacoustic musical instrument, or a reactable, this Academy Center can rightly be regarded as the most technologically advanced one in Russia. When performing a musical piece, physical objects can be moved across the surface of the reactable. These objects represent the elements of a standard modular synthesizer: various envelopes, filters, and generators. Their mutual location defines the sound that the device produces. Several people can work at the table, as one musician can manage the tonality of only two generators. This instrument can be a hallmark of high technologies of the beginning of the XXI century.



5. THE CONCEPT OF TECHNICAL EQUIPMENT

1 CHOICE OF CONCEPT

1.1 PURPOSE

*Creation of the breakthrough
educatory environment as a
part of the Talent Academy
project*

1.2 CAPABILITIES AND RESTRICTIONS OF THE PROJECT

CAPABILITIES OF THE PROJECT

The unique area, mix of classic and hi-tech interior solutions, will be an extra impulse for children's creativity development

RESTRICTIONS OF THE PROJECT

- 1 Prohibition for interior (nationwide heritage asset) integrity violation
- 2 Requirements to artistic imaginative harmony of equipment and interior

1.3 TECHNIQUE CONCEPT BACKGROUND

RESTRICTIONS 1 & 2

MOBILE SOLUTIONS WILL ALLOW

Prohibition of implementation
of modifications for installation
of the equipment

Avoid fixed constructions at ceiling
and noticeable fixtures on walls and
floor



Requirements for balanced
combination of modern
technologies and classic interior

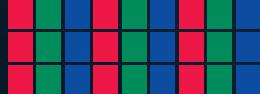
To remove equipment rapidly and
provide initial interior appearance



Require flexible and mobile
solutions

Moreover, decorative components of
mobile constructions will sustain common
style of the interior

Summary: Restrictions 1 & 2 propose flexible
mobile solutions



RESTRICTION 3

Restricted space of the premises (The building refurbishment project does not suppose interior modification)



Large flow of visitors expected



Stipulate strict requirements to traffic capacity of the project and effective space use

Procedure of transformation of the same premises into the space for different purposes can be a solution due to various set of equipment, furniture, and facilities

This will provide for creation of flexible procedure of the building operation, and its traffic capacity increase

Summary: Restriction 3 will provide for application of transformation procedure

TWO CONCEPTUAL STRATEGIES

Mobile solutions for technique



Space transformation

Fully solve the set tasks considering the stipulated restrictions



2 IMPLEMENTATION OF THE CONCEPT

Procedure of transformation of the same premises into the spaces for different purposes will be realized by usage of mobile sets of equipment and furniture

There will be 12 Creativity Centers at the Talent Academy.

PROCEDURE OF TRANSFORMATION OF THE PREMISES WILL FACILITATE:

- flexible adaptation of the premises for specific events, for each Center, and sharing the load all over the complex



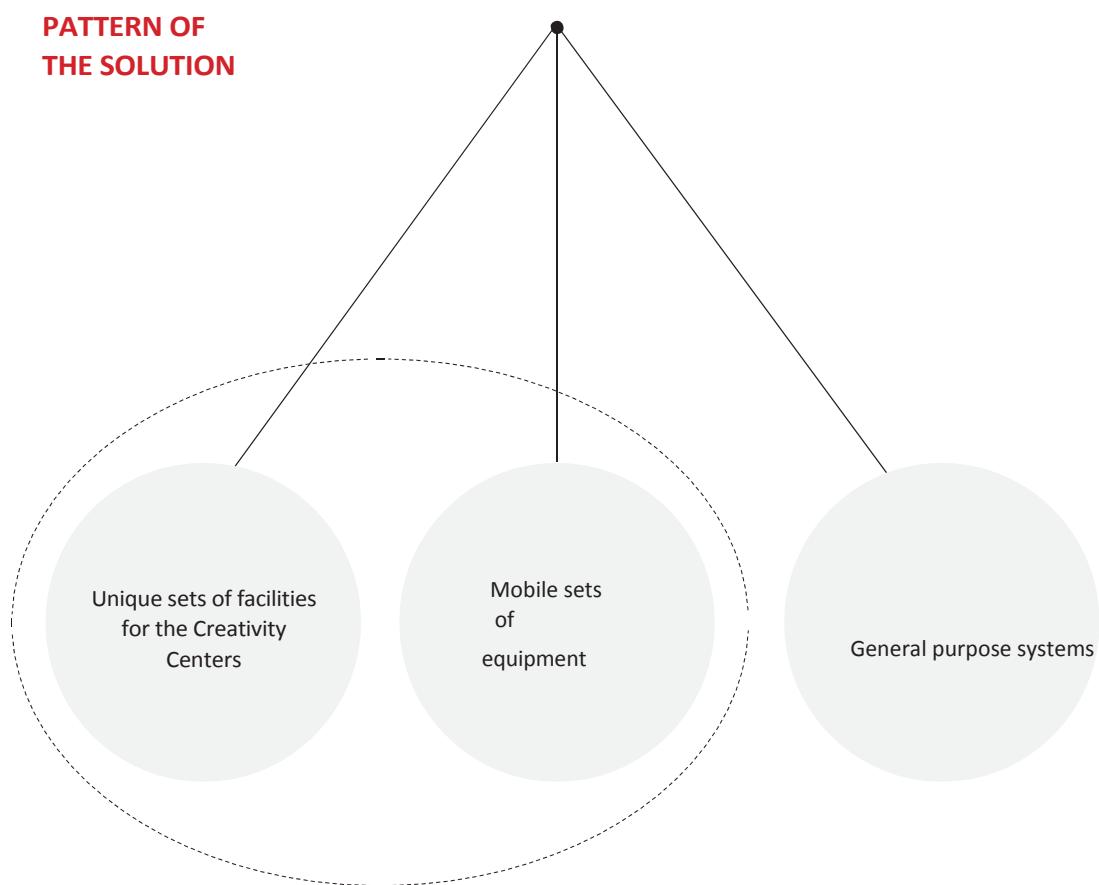


Using the park territory will provide for extra transformation capabilities. This will diversify the format of the events and increase the attendance figure, that is significantly topical during summer period.

See the summary table of the options for transformation of the premises in [Appendix 1](#).



2.1 FUNCTIONAL DESCRIPTION OF THE SOLUTION



Modularity and compatibility are the ground strategies for the development of the Academy premises technique. Each premise will be equipped with fixed minimal set of equipment and furniture for its main function.

Additional functionalities of the premises will be obtained by means of mobile equipment sets at the Centers. The equipment sets will be selected considering an opportunity to augment each other. With mobile equipment sets, the Centers will be able to arrange their premises as the undertaken event format will require.



3 SETS FOR THE CENTERS

3.1 THE EXHIBITION CENTER

THE EXHIBITION CENTER (GREAT HALLS OF THE PALACE) WILL BE USED FOR EXHIBITION OF STUDENTS' ARTWORKS .

THE CONCEPTUAL SOLUTIONS



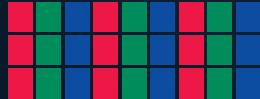
Virtual museum showcase

Mobile exhibition stands have a built-in LED light source and a self-powered and can be installed in any room of the palace. Mobile stands are ideal for the organization of exhibitions of creative works of students of the Academy



The showcases construction uses the design elements of pedestals sculptures installed in the exhibition center, which is the main entrance to the academy. Museum showcases are a successful combination of classic forms and modern technologies. Space to accommodate exhibits closed transparent LG Display, which allows to complement the exhibit with additional media materials, such as text, images and video. The content on the display is placed in such a way as to complement the exhibit and create a single composition.





3.2 THE STAGE AND CONCERT CENTER

THE STAGE AND CONCERT CENTER WILL BE INTENDED FOR FINAL CONCERTS AND CREATIVE EVENINGS, AND STAGINGS OF THE GROUPS OF STUDENTS FROM EDUCATIONAL INSTITUTIONS AT THREE HALLS OF THE PALACE.

THE CONCEPTUAL SOLUTIONS



Mobile system
(screens, projector)



Sound and lighting
mobile systems



Possibility of deployment
at the park zone during
summer period
(2-nd stage)

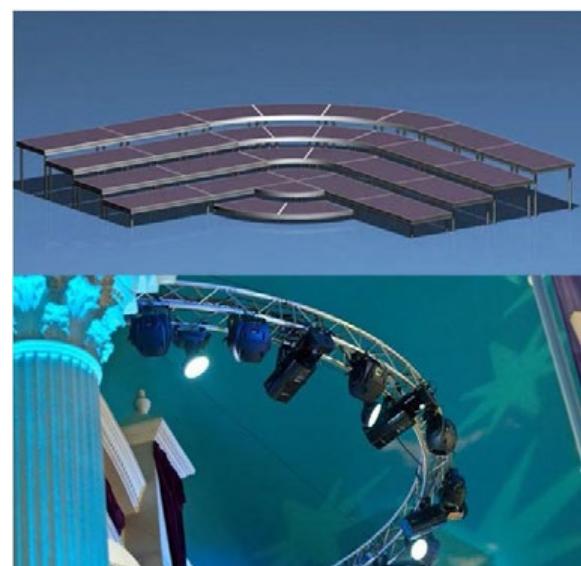


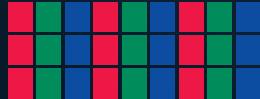
Mobile stage
(2-nd stage)

For concerts and stagings, mobile set based on dismountable system will be provided, including:
stage, screen, projector, as well as sound amplification equipment set, lighting fixtures, and instrumental and vocal microphone.

For installation of the equipment, truss constructions will be installed for the hours of the event. For example, load bearing construction for the installation of lighting fixtures in front of the stage. Or, it can be a three-dimensional framework all over the hall, bearing surround sound systems, projector, projecting screen; in this case, the hall can be used as a cinema theater.
Stage decks will be height-controlled.
Universal fastening will allow assembling of any stage constructions, from small podium for reciters to fashion shows.

The stage can be placed on the territory of the palace park and used for final mass events by city creative groups that is most topical during spring and summer periods.





3.3 THE GAME OF SKILLS CENTER

THE CENTER IS INTENDED FOR GAMES OF SKILLS FOR PUPILS («BRAINIACS», «FIVE WS (WHAT? WHO? WHEN? WHERE? WHY?)», «JEOPARDY»...).

THE CONCEPTUAL SOLUTIONS

Interactive place for game host	System of mobile screens	Wireless voting boards	Transformable places for the audience

The Game of Skills Center will be proposed to be equipped with the universal game host place based on Interactive videowall with screens displaying current game situation. The game host will be able to direct the game process using the table: to choose a game, to enter graphic and text information, to indicate correct questions, etc.

For the audience, the system of stage decks arranging the mobile platforms (pedestals) will be proposed. For communication with the audience, wireless boards for interactive voting will be proposed.

Moreover, the Center will be equipped with sound system and microphones.



Wireless interactive voting boards



Game host interactive place



3.4 THE SOCIALIZATION CENTER EXPERIENCE OF SUCCESSFUL PEOPLE

MEETING PLATFORM FOR CHILDREN AND
TEENAGERS AND SUCCESSFUL AND
OUTSTANDING PEOPLE

THE CONCEPTUAL SOLUTIONS



Wireless
conference
system



Video conference
system



Transformable
furniture

The Center consists of two premises. For one of them, free layout will be proposed. This hall will be transformable depending on the undertaken event.

- It can be a classic press conference with presidium, or
- an informal meeting. The dismountable presidium table and mobile furniture set will be provided for such events.

The other premise will be equipped with oval conference table.

The equipment of the Socialization Center will include:

- wireless conference system set
- video conference equipment
- LCD panels on mobile stands
- sound amplification system



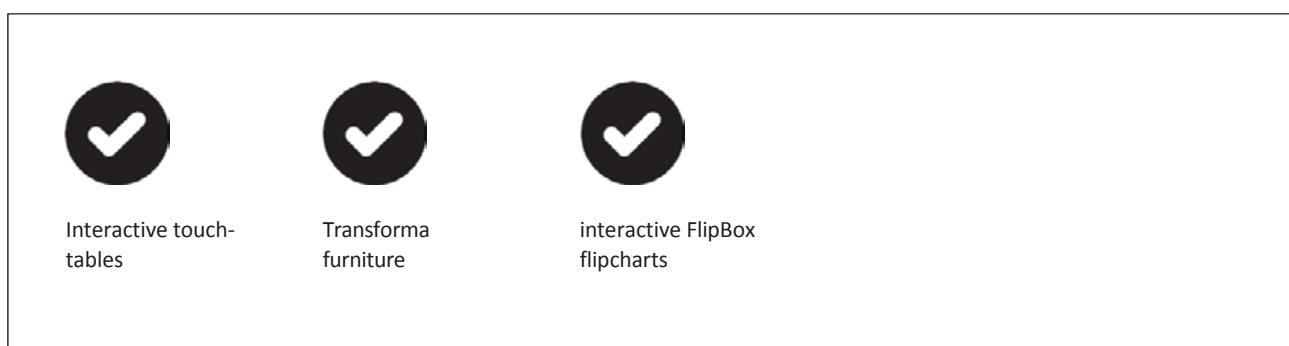
Wireless
conference
system set



3.4 THE COWORKING CENTER FOR REALIZATION OF SOCIAL INITIATIVES OF CHILDREN AND YOUNG PEOPLE

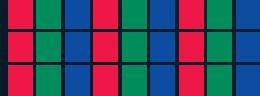
THE COWORKING CENTER IS A SPACE FOR INDEPENDENT WORK OF STUDENTS, FREE COMMUNICATION, DISCUSSION OF IDEAS, AND SEARCH OF LIKE-MINDED PEOPLE.

THE CONCEPTUAL SOLUTIONS



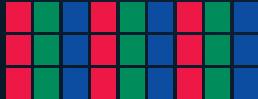
For the project's collaboration in the coworking center Polymedia propose to install an interactive video wall. Video Wall is a 4 LCD panel 55 ", installed vertically. Interactivity is implemented with the use of infrared frame. The videowall software allows students to work with multimedia content used in the project and which is stored on file servers of the Academy. These are images, videos, PDF documents. Students can discuss the material, make graphic comments over the documents, save them and send them by mail. Also, the video wall can be used for quizzes. A special software is already developed for this purpose, it allows children to create their own quizzes and hold competitions, evaluating the accuracy and speed of responses to questions.

In addition, the video wall can be used for standard applications, operating under Windows.



For a teamwork skills Polymedia also provided an interactive complex Flipbox. It has all options of the multimedia flipchart and allows working with documents. Built-in video camera and video conferencing software allows to work together on a project from other school students.

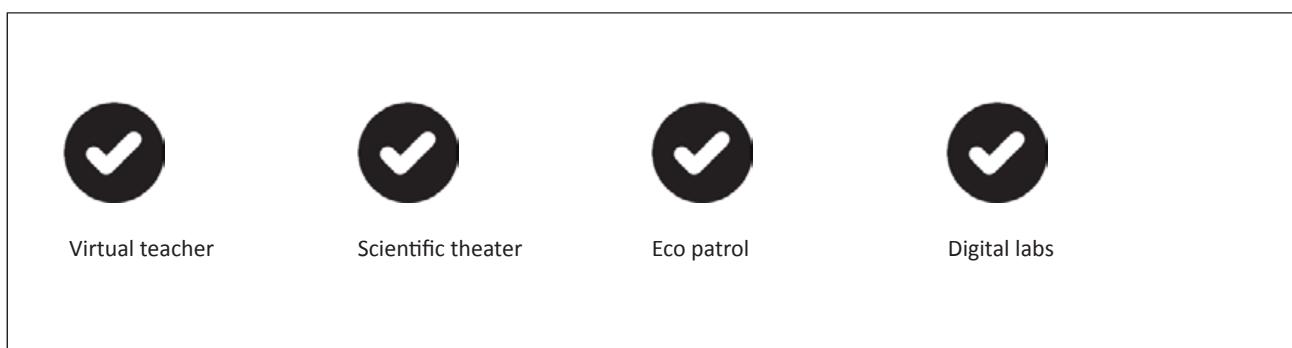




3.5 THE CENTER OF STEM

AT THE CENTRE OF STEM, THE PARTICIPANTS WILL INDEPENDENTLY EXPLORE THE PHYSICAL PHENOMENONS, CHEMICAL AND NATURAL SCIENCE MODELS, WATCH SURPRISING EXPERIMENTS, AND TAKE PART IN EXPERIMENTS.

THE CONCEPTUAL SOLUTIONS



Digital laboratories will allow students to explore various phenomena visually

Examples

- physics (optics, mechanical science, physics of heat, static electricity, design engineering)
- chemistry (spectrometry)
- biology (physiology, anatomy)
- ecology (mobile weather station, examination of environment ecological condition and its influence on one's health)
- geography (navigation, working with google maps)

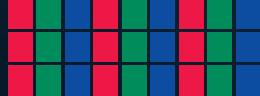
The participants will be able to create their own scientific projects and subsequently present them on the scientific theatre stage in order to obtain the skills of presentation. Also it is recommended to engage participants as guides at demonstration halls.



All exhibits and digital sensors will be anti-vandal and intended for multiple use.

In front of each exhibit item there will be an LCD panel with 'virtual teacher' telling kids about meaning of the experiment and bringing entertaining facts associated with it.

LCD panels will be arranged like brushworks not to spoil the room interior.



For the work with laboratory complexes was specially designed interactive tables containing educational materials and self-fulfillment of the instructions of experiments. The table top has an interactive display to navigate the learning materials. All the learning materials are displayed on a vertically installed screen.

All training materials describe the phenomenon under investigation, interesting facts, step by step instructions for the implementation of the experiment, and a quiz to evaluate the acquired knowledge.

The construction and design of the table are made in accordance with the design of the room.



Interactive table for laboratory kits



Кто может видеть поляризованный свет?

Глаз человека

В глазу человека молекулы светочувствительного пигмента беспорядочно, а в глазу насекомых они уложены аккуратными рядами, ориентированными в одном направлении.

Это и разные колебания плоскост

КТО МОЖЕТ ВИДЕТЬ ПОЛЯРИЗОВАННЫЙ СВЕТ?

[Вернуться](#) [Далее](#)

«И, вглядываясь в растворенную дверь боялона ... , и в чистое небо, на котором, как смотрите пристально, друг покажется как будто полное желтоватое пятнышко и снова исчезнет»

*Example of a lesson
“Polarization of light”*



The Center will have many laboratory complexes allowing to renew the exhibit. Replacement of the exhibit can be associated with the school educational program on physics, biology, chemistry, and other disciplines. This will allow the students to perform experiments in relation to the subject that is currently given at school. The Center will be able to conduct topical exhibits on various historical dates and/or explorations of the great scientists.

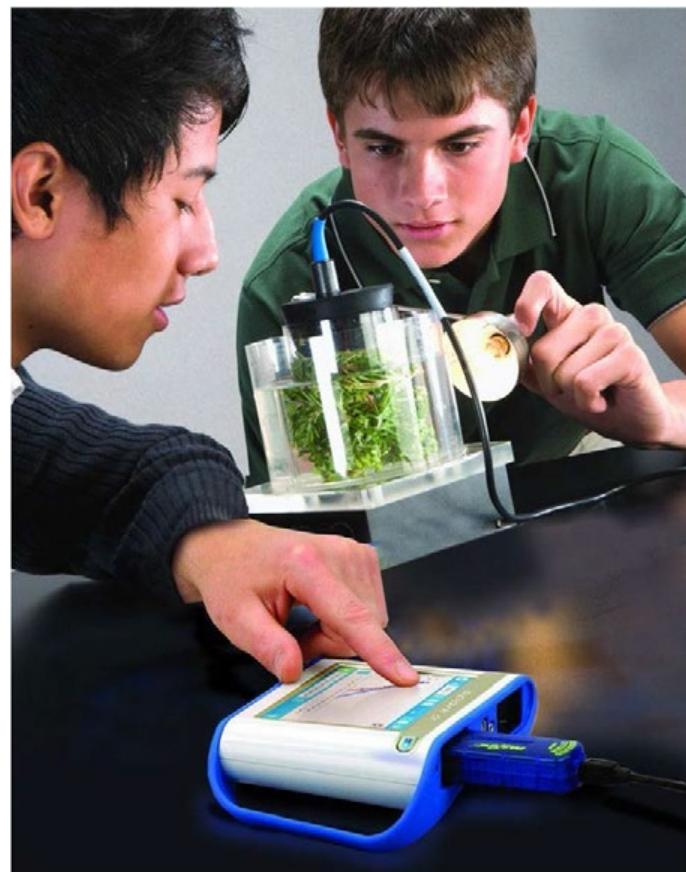
The exhibits items demonstrating physical effects and principles we always face day by day but do not pay attention to, will be installed in the premises of the Center.





The Science Theater is to be used as a stage for demonstration of the scientific projects performed by the students, and as a cognitive and entertainment center for everybody, and the Academy students with tutors will present eye-catching projects or something that can be called entertaining experiments. For example, spectacular and cognitive experiments with food products can be conducted using the PASCO chemical multi sensor. The Science Theater format will not only get students interested in scientific explorations but engrain such competencies as public speaking skills and ability to use technical facilities and tools.

Eco patrol will give an opportunity to execute field research projects using mobile solutions based on tablet computers and multisensors. For example, quality of water, soil, and air as well as climate changing etc. can be evaluated using simple sensors.



Eco patrol

ORGANIZATION MODELS OF LEARNING PROCESS

- Implementation of complementary education programs
- Implementation of extracurricular activity programs (networking)
- Laboratory and practical work within the curriculum
- Execution of individual projects by students (as part of Federal State Educational Standard of General Secondary Education introduction)
- Organization and execution of topical sessions for talented and gifted children
- Employment of students during holidays time
- Implementation of complementary occupational education for teachers (probation site)





3.6 THE PUBLISHING CENTER

THE PUBLISHING CENTER IS INTENDED FOR STUDENTS' INDEPENDENT CREATION OF VIDEO, AUDIO, AND PRINTED MATERIALS

THE CONCEPTUAL SOLUTIONS



Workstations for
video editing
and 3D modelling



Flipbox interactive
flipchart



Virtual studio

The students will be able to create materials about the Academy of Talents activity independently, and they will be posted on the Academy website. Moreover, children will get an opportunity to improve their skills of movie making and TV reporting. Mobile set of TV cameras will be provided for this purpose. The Publishing Center will be equipped with modern graphical stations and software for graphics and video.

TV camera





The Publishing Center will provide workbenches for:

- Working with photo/picture processing software
- Working with video editing software
- Working with 3D modelling software
- Web design

The Flipbox electronic flipchart will be installed at the Design Center for discussion of the work results.





3.7 THE CENTER OF EDUCATIONAL PROJECTS. THE CENTER OF PITHY ENTERTAINMENT. EVENT CENTER

The entertainment and educational events are planned to be held at each Center. From the technical point of view, formats of the events are similar, so there are supposed to be universal mobile sets of visualization and sound amplification facilities that can be installed in any premise of the Academy.

Moreover, there will be small dismountable podiums for awarding ceremonies and small children stagings, as well as the sets of comfortable furniture for organization of classes and entertainment games.





3.8 VIDEOCONFERENCE HALL

VIDEOCONFERENCE HALL OF THE ACADEMY OF TALENTS WILL BE AN OPEN SITE TO EXCHANGE OF EXPERIENCE AND IDEAS, AND COMMUNICATE WITH SPECIALISTS FROM ALL OVER THE COUNTRY AND THE WORLD

PURPOSE:

1. Working meetings and conferences for the management of the Academy and education committee
2. Conferences for students and teachers
3. Open seminars and lections
4. TV bridges with the partners of the Academy
5. Ceremonies

The conference hall will be equipped with modern multimedia facilities for support of the undertaken events. Video and graphic materials planned to be used in the conference hall will be broadcasted via video conference communication channels of high quality.

EQUIPMENT

1. Information display system on the base of LCD panels
2. Sound amplification system
3. Wireless conference system
4. Synchronous translation
5. Video conference
6. Recording and broadcasting system





5 COMMON SYSTEMS OF THE PALACE

5.1 DISTRIBUTED SOUND AMPLIFICATION SYSTEM

THE GENERAL CONCEPT OF TRANSFORMATION OF THE PREMISES WILL BE SUPPORTED BY DISTRIBUTED SOUND AMPLIFICATION SYSTEM DUE TO POSSIBILITY OF FREE AND INDEPENDENT CONFIGURATION OF AUDING ZONES.



Distributed sound amplification system will be the network of mini sound systems installed in all premises of the Palace.

Places of installations are selected in accordance with the format of the event.

Signal transmission is suggested to perform using wireless receivers.

Each premise will be a separate zone with independent control. The premises will be combined arbitrary depending on the event performed. Moreover, an opportunity of uniform background sound for the whole territory of the Palace will be available.

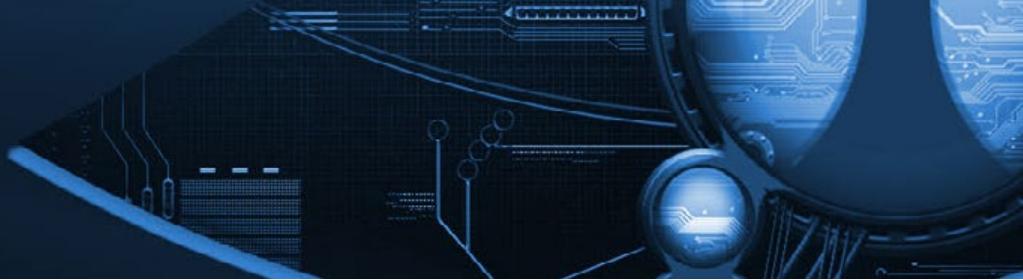
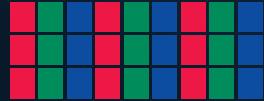
All-weather outdoor sound systems distributed over the whole territory is suggested as the second step of the project.



5.3 DIGITAL SIGNAGE SYSTEM WITH MOBILE DISPLAYS

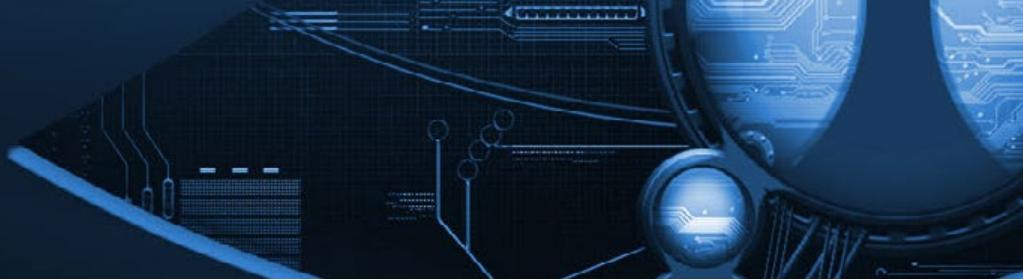


Mobile displays are equipped with Digital Signage network player to connect to the WiFi network of general building. With this system displays can be installed in any room of the palace, and the customer gets the possibility of remote management of content displayed on the screen.



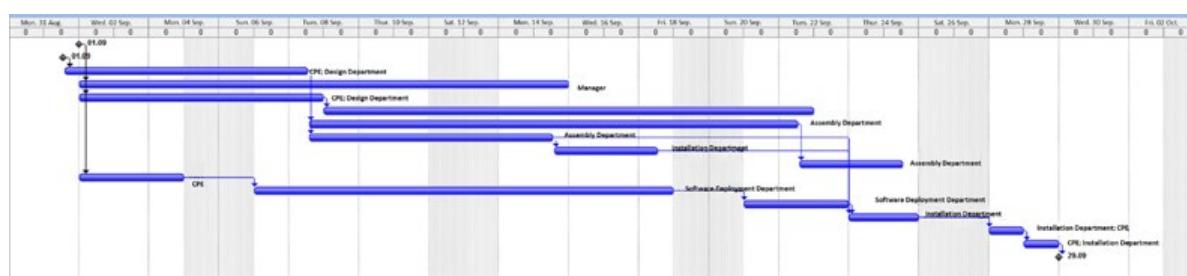
APPENDIX 1

OPTIONS FOR TRANSFORMATION OF THE PREMISES



6. STAGES OF IMPLEMENTATION

Name of production stage	Duration	Starts	Ends
1 Concluding government contract		01.09.2015	01.09.2015
2 Receiving as-built documentation for reconstruction from contractor		01.09.2015	01.09.2015
3 Developing project documentation	5 days	01.09.2015	08.09.2015
4 Delivering equipment	10 days	02.09.2015	15.09.2015
5 Developing design documentation for custom-made devices	5 days	02.09.2015	08.09.2015
6 Producing custom-made interactive complexes	10 days	09.09.2015	22.09.2015
7 Installing cables and cast-in parts	10 days	08.09.2015	22.09.2015
8 Installing equipment for wireless network	5 days	08.09.2015	15.09.2015
9 Setting up wireless network	3 days	15.09.2015	18.09.2015
10 Mounting equipment	3 days	22.09.2015	25.09.2015
11 Adjusting the requirements specification for interactive complexes	3 days	02.09.2015	04.09.2015
12 Developing software for interactive complexes	10 days	07.09.2015	18.09.2015
13 Setting up software for interactive complexes	3 days	21.09.2015	23.09.2015
14 Commissioning and adjusting the complex	2 days	24.09.2015	25.09.2015
15 Integrating the complex with central server equipment	1 day	28.09.2015	28.09.2015
16 Testing the complex	1 day	29.09.2015	20.10.2015
17 Presentation of the project to the Governor Georgy Poltavchenko		14.12.2015	14.12.2015



7. PROBLEMS DURING PROJECT IMPLEMENTATION

Kamenny Island Palace is a building protected by the government, and even insignificant violations of the architecture and design are not allowed; therefore, it was decided that practically all of the equipment should be connected over a wireless technology and be controlled via an integrated control system

The activities associated with solving the aforementioned problems during implementation of the project are reviewed in section 5, "The Concept of Technical Equipment".

8. PROJECT DEVELOPMENT CAPABILITIES AFTER IMPLEMENTATION

1. The Center of Recreational Sciences has a multipurpose laboratory tables. One of the possibilities of the center development is an increase the number of experimental facilities and the development of new interactive lessons.
2. The Academy has a large park area, which may be involved in the educational process. This may be the environmental studies carried out with the use of PASCO sensors, sporting events and concerts. Interactive kiosks installed in the park will introduce children to the history of the Palace and St. Petersburg.

9. CONTACT INFORMATION

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