КИБЕР/РОССИЯ

world skills Russia

TECHNICAL DESCRIPTION

DEVELOPMENT OF VIRTUAL AND AUGMENTED REALITY

WorldSkills Russia "Young Professionals" Union (hereinafter referred to as WSR) in accordance with the charter of the organization and rules of the competition has established the following minimum requirements to this professional skill required for participation in the competition.

This technical description includes the following sections:

1. INTRODUCTION

1.1. PROFESSIONAL SKILL NAME AND DESCRIPTION

1.1.1 Professional skill name:

"Development of Virtual and Augmented Reality (VR/AR)".

1.1.2 Professional skill description.

Virtual and augmented reality is a new, fast-growing industry. The number and quality of products released on the AR/VR platform is growing at an exponential rate. Today virtual and augmented reality applications are regularly used in many areas as convenient control interfaces, simulators, innovative learning programs, in the entertainment industry, and in business. Before long, the technologies of this sector will become a part of everyday life. Popularization of AR/VR, training of skilled AR/VR personnel should become one of the most important priorities in the innovative education system. The AR/VR educational program is vast and mainly includes training of specialists in the following up-to-date professions: programmer, (3D) artist, game designer.

1.2. RELEVANCE AND SIGNIFICANCE OF THIS DOCUMENT

This document contains information about the standards required to compete in these skill competitions, and the assessment principles, methods and procedures that govern the competition.

Every expert and competitor must examine this Technical Description.

1.3. ASSOCIATED DOCUMENTATION

Since this Technical Description contains only skill-specific information, it must be used in association with the following documents:

- WSR — (Regional/National) Competition Standing Orders;
- WSR — WSR Internet resources;
- WSR Policy and Statutory Regulations.
- Skill-specific OHSE Instruction. •

2. WORLDSKILLS STANDARDS SPECIFICATION (WSSS)

2.1. GENERAL WSSS GUIDELINES

The WSSS determines the knowledge, understanding and specific skills that underpin best international practices of technical and vocational work performance levels. It should represent collective understanding of the importance and relevance of the corresponding job specialization for the industry and business.

The skill competition is intended to reflect best international practices as described by the WorldSkills Standards Specification to the extent they are able to be implemented. The WorldSkills Standards Specification is therefore a guide to the required training and preparation for the skill competitions.

In skill competitions, a professional level is determined through the assessment of the performed work. There is no provision made for individual professional tests for competitors.

The WorldSkills Standards Specification is divided into clearly defined sections with headings and reference numbers.

Each section is assigned with a percentage of total marks to indicate its relative importance within the Standards Specification. The sum of all the percentage marks is **100**.

The marking scheme and the test project will assess only those skills that are set out in the Standards Specification. They will reflect the Standards Specification as comprehensively as possible within the constraints of the skill competition.

The Marking Scheme and the Test Project will follow the allocation of marks within the Standards Specification to the practically possible extent.

Section		Importance (%)
1	**VR application Design**	**8.5**
	A specialist shall know and understand: • VR application design, • current (market) requirements to VR application design, • VR interface design requirements, • UX in virtual reality, • target platform technical requirements.	
	A specialist shall be able to: • know the Unity or Unreal Engine 4 game engine (for prototype development), • develop an application design document, • know the required software.	
2	**AR application Design**	**8.5**
	A specialist shall know and understand: • AR application design, • current (market) requirements to AR interface design, • UX for augmented reality, • target platform technical requirements.	
	A specialist shall be able to: • know the required software, • know the Unity or Unreal Engine 4 game engine (for prototype development), • develop an application design document.	
3	**Programming of AR/VR Applications (Unity, UE4, SDK, Plugins)**	**20**
	A specialist shall know and understand: • know the Unity or Unreal Engine 4 game engine,	

	• know one or several programming languages (C++, C#, Blueprint, UnityScript), • know the Visual Studio, MonoDevelop, Rider development environments, • Understanding and active use of the object-oriented programming (OOP) principles, • Knowledge of AR/VR algorithms and logic, • Know the required SDK, • Understand the VR and AR equipment operation principles, • Have cooperation skills (Unity Collaborate, Git, etc.).	
	A specialist shall be able to: • Use the OOP principles, • Perform quick troubleshooting and debugging, • Perform code refactoring, • Create a user interface, • Implement game mechanics, • Implement gameplay.	
4	**Art Design Technology**	**19**
	A specialist shall know and understand: • 3D modelling principles, • Particles, • Textures, their type and creation and usage features, • Shaders and materials, rendering features, • Formats of models and textures, • Features of model and texture settings, as well as of materials to be exported into the game engine.	
	A specialist shall be able to: • Create 3D models (3DSMax, Maya, Blender), • Create UV mapping (3DSMax, Maya, Blender), • Perform texture mapping (Photoshop, Substance Painter, Blender), • Rigging and animation (3DSMax, Maya, Blender), • Set-up animations, • Skeleton setting and skeletal animation, • Create 3D models of objects, characters and surrounding,	

	• Create basic textures and special textures, • Create and set-up shaders and materials in modeling programs and game engines, • Export/import models, materials, textures, animations, skeletons into the game engine.	
5	**Graphical Programming**	**26**
	A specialist shall know and understand: • Target platform rendering features, • Lighting and shading setting features, • Use of textures and materials in the game engine, • Graphics library operation features (DirectX, Vulkan, OpenGl), • Geometrical object and image rendering principles, • Shader programming and setting, • Post-processing, • Vector and linear algebra, • Lighting and shading implementation feature of the used game engine and target platform.	
	A specialist shall be able to: • Set-up static and dynamic lighting in the used game engine, Baked lighting, • Set-up standard shaders, • Optimize rendering processes, • Set-up post-processing and final picture view, • Create procedural geometry using the game engine resources, • Program frame rendering.	
6	**Application Profiling and Optimization**	**8**
	A specialist shall know and understand: • Special optimization features of PC and mobile device applications, • Know the architecture of mobile devices (hardware) in the context of	

	application optimization, • Ability to use built-in game engine profilers and external profilers (XCode, SnapDragon).	

	A specialist shall be able to:
	• Optimize a VR/AR application performance
	• Optimize:
	  • level geometry,
	  • textures and materials,
	  • main application process,
	  • use of physics in an application.	

7	**Publication of Applications (build assembly)**	**I**
	A specialist shall know and understand: • Special features of an application build for Windows (VR), • Special features of an application build for Android (VR),	
	A specialist shall be able to: • Correctly assemble an application build, • Launch the build on the device, • Demonstrate the application operability,	
8	**Team Work and Soft Skills**	**E**
	A specialist shall know and understand: • Customer and team member communication standards • Each competitor's team role • His own expertise area	
	A specialist shall be able to: • Work as a part of a team • Communicate and negotiate with clients and team members • Manage members of his own team • Exercise time management	

3. ASSESSMENT STRATEGY AND TECHNICAL FEATURES

3.1. GENERAL GUIDANCE

Assessment is governed by the WorldSkills Assessment Strategy. The Strategy establishes the principles and techniques to which the WSR assessment and marking must conform.

The expert assessment practice lies at the heart of the WSR Competition. For this reason, it is the subject of continuous professional improvement and scrutiny. Growing experience in assessment will make its own informational contribution to the use and direction of main assessment tools used on the WSR Competition: The Marking Scheme, Test Project, and Competition Information System (CIS).

Assessment on the WSR Competition falls within one of the two categories: objective assessment and jury's opinion (subjective assessment). For both types of assessment, the use of explicit benchmarks against which to assess each aspect is essential to guarantee quality.

The marking scheme must follow the weightings from the Standards Specification. The test project is the assessment vehicle for the skill competition, and also follows the Standards Specification. The Competition Information System (CIS) enables timely and accurate recording of marks and has an expanding supportive capacity.

In general, the Marking Scheme will lead the process of the Test Project development. After this, the marking scheme and the test project will be designed and developed through an interactive process in order to ensure that together they optimize their relationship to the Standards Specification and the Assessment Strategy. They will be submitted to WSR for approval together, in order to demonstrate their quality and conformity with the Standards Specification.

In order to be submitted to WSR for approval, the Marking Scheme and the Test Project shall be approved by certified WSR Skill Experts.

4. ASSESSMENT SCHEME

4.1. GENERAL GUIDANCE

This section describes the role and place of the marking scheme, how the experts will assess competitors' work demonstrated through the test project performance, and the procedures and requirements to marking.

The Marking Scheme is a pivotal instrument of the WSR Competition, in that it ties assessment to the standards that represent the skill. It is designed to allocate marks for each assessed performance aspect in accordance with the weightings in the Standards Specification.

By reflecting the weightings in the Standards Specification, the Marking Scheme establishes the parameters for the design of the Test Project. Depending on the nature of the skill and its assessment needs, it may initially be appropriate to develop the Marking Scheme in more detail as a guide for the Test Project design. Alternatively, the initial Test Project design can be based on the outline Marking Scheme. From this point onwards, the Marking Scheme and the Test Project shall be developed together.

Section 2.1 above indicates the extent to which the Marking Scheme and the Test Project may diverge from the weightings given in the Standards Specification, if there is no practicable alternative.

The Marking Scheme and the Test Project may be developed individually either by one person, or by a group, or by all Experts. The detailed and final Marking Scheme and the Test Project designed individually must be approved by the International Expert or Skill Competition Manager prior to their submission for independent quality assurance. The exception from this rule applies to those skill competitions, which use an external designer for the development of the Marking Scheme and the Test Project, and where the final versions of the Marking Scheme and the Test Project are approved and quality assured by the International Manager or Skill Competition Manager.

In addition, Experts are encouraged to submit their Marking Schemes and Test Projects for comment and provisional approval well in advance of the competition in order to avoid setbacks at a later stage.

They are also recommended to work with the Skill Competition Manager at this intermediate stage.

In all cases, a complete and approved Marking Scheme must be entered into the CIS at least eight weeks prior to the Competition using the CIS standard spreadsheet or other agreed methods. The Chief Expert is responsible for this process.

4.2. ASSESSMENT CRITERIA

The main headings of the Marking Scheme are the assessment criteria. These headings are generated concurrently with the test project development. In some skill competitions, assessment criteria may be similar to section headings in the standards specification; in others, they may be completely different. There will normally be between five and nine assessment criteria. Whether or not they match the headings, the marking scheme must reflect the weightings specified in the Standards Specification.

The Assessment Criteria are created by the person(s) developing the Marking Scheme who is free to define the criteria he or she considers most suitable for the assessment of the Test Project performance.

The Mark Summary Form generated by the CIS will include a list of assessment criteria.

The number of points allocated to each criterion will be calculated by the CIS. This will be the cumulative sum of points awarded to each aspect within that assessment criterion.

4.3. SUBCRITERIA

Each assessment criterion is divided into one or more subcriteria. Each subcriterion becomes a heading for a WorldSkills marking form.

Each (subcriteria) marking form is specified with a certain date on which it will be completed.

Each (subcriteria) marking form contains assessable aspects that are due to objective assessment or jury's decision (subjective assessment). Each subcriterion has aspects assessed both by measurement and decisions, in these cases, there is a special marking form for each one of them.

4.4. ASPECTS

Each aspect defines, in detail, a single item to be assessed and marked, and the instructions on how the points are to be awarded. Aspects are assessed either objectively or by jury's opinion (subjectively) and appear in the corresponding marking form.

A marking form in detail lists every aspect to be marked together with a mark allocated to it and a reference to a section of the skill as set out in the Standards Specification.

The sum of the marks allocated to each aspect must fall within the range of marks specified for that section of the skill in the Standards Specification. This will be displayed in the CIS mark allocation table in the following format when the marking scheme is being reviewed (Section 4.1)

	Criterion				Total points for the WSSS section
WorldSkills Standard Specification (WSSS) Sections	**A**	**B**	**C**	**D**	
1	8.5				**8.5**
2		8.5			**8.5**
3	3	3	7	7	**20**
4			9.5	9.5	**19**

	5			13	13	**26**
	6			4	4	**8**
	7	1.5	1.5	1	1	**5**
	8	1	1	1.5	1.5	**5**
Total points for criterion		**14**	**14**	**36**	**36**	**100**

4.5. ASSESSMENT AND MARKING ACCORDING TO A JURY'S OPINION (SUBJECTIVE ASSESSMENT)

A jury's opinion is using a scale from 0 to 3. This assessment is used to render a subjective decision on the quality of the object. 3 experts shall participate in the assessment. Each of them should give their assessment, in this case, the permissible difference shall not exceed 1. If the assessment difference is more than 1, the assessment will not be accepted and the experts shall negotiate with bringing appropriate arguments.

Each aspect of such assessment shall have additional information with the description of each assessment level.

For example:

- 0 — performance is below the industry standard or has not been carried out;
- 1 — performance does not correspond with the industry standard;
- 2 — performance corresponds with the industry standard and, in specific respects, exceeds it;
- 3 — performance wholly exceeds the industry standard and is assessed as excellent.

4.6. OBJECTIVE ASSESSMENT AND MARKING

Each aspect shall be assessed by three Experts. Unless otherwise specified, only the maximum mark or zero will be awarded. Wherever they are used, the benchmarks for partial marking are explicitly defined within the aspect framework.

4.7. USE OF OBJECTIVE ASSESSMENT AND JURY'S OPINION (SUBJECTIVE ASSESSMENT)

The final understanding of objective and subjective assessments will be reached when the Assessment Scheme and the Test Project are approved. The provided table contains approximate information and is intended for the development of the Marking Scheme and the Test Project.

Criterion		Points		
		Jury's opinion	Objective	Total
A	AR application design and prototype	3	11	14
B	VR application design and prototype	3	11	14
C	AR application development	15.5	20.5	36
D	VR application development	15.5	20.5	36
Total		37	63	100

4.8. ASSESSMENT PROCEDURE

The Chief Expert and the Deputy Chief Expert shall discuss and divide the experts into groups (a group is composed of at least three people) for marking. Each group must include at least one experienced Expert.

An expert shall not assess a competitor from his own organization.

Where possible, the Experts shall allot the same number of points. The Experts inspect data upon completion of each module using the assessment criteria as reference.

5. TEST PROJECT

5.1. GENERAL REQUIREMENTS

Sections 2, 3 and 4 govern the Test Project (TP) development. The recommendations in this section provide additional explanation of the TP content. Regardless of the number of modules, the TP should include an assessment per each of the WSS Specification sections.

The Test Project performance shall take not less than 15 and not more than 22 hours.

In order to be qualified to perform the Test Project, the competitors shall be from 16 to 28 years old.

The Test Project shall not fall outside of the WSS Specification.

A competitor's knowledge shall be assessed exclusively through the practical performance of the Test Project.

The performance of the Test Project determines the need for team work (3 people per team).

5.2. TEST PROJECT STRUCTURE

The Test Project contains 4 modules:

Module 1. **AR application design and prototype.**

Module 2. **VR application design and prototype.**

Module 3. **AR application development.**

Module 4. **VR application development.**

5.3. TEST PROJECT DEVELOPMENT REQUIREMENTS

5.3.1. The test project consists of the following modules:

Module 1. AR application design and prototype.

- The module completion time is 4 hours;
- The organizer must provide only the equipment and software required for the module performance (refer to the Infrastructure List, Equipment per Team, 1 - 10);
- The Module 1 performance shall be started on Day C1;
- The module shall be marked every day in stages, these stages shall be defined in the Test Project;
- Module 1 shall be completed on Day C1;

Module 2. VR application design and prototype.

- The module completion time is 4 hours;
- The organizer must provide only the equipment and software required for the module performance (refer to the Infrastructure List, Equipment per Team, 1 - 16);
- The Module 2 performance shall be started on Day C1;
- The module shall be marked every day in stages, these stages shall be defined in the Test Project;
- Module 2 shall be completed on Day C1.

Module 3. AR application development.

- The module completion time is 7 hours;
- The organizer must provide only the equipment and software required for the module performance (refer to the Infrastructure List, Equipment per Team, 1 - 10);
- The Module 3 performance shall be started on Day C2;
- The module shall be marked every day in stages, these stages shall be defined in the Test Project;
- Module 3 shall be completed on Day C2.

Module 4. VR application development.

- The module completion time is 7 hours;
- The organizer must provide only the equipment and software required for the module performance (refer to the Infrastructure List, Equipment per Team, 1 - 10);
- The Module 4 performance shall be started on Day C3;
- The module shall be marked every day in stages, these stages shall be defined in the Test Project;
- Module 4 shall be completed on Day C3.

5.3.2. Competition workshop requirements:

In accordance with the Infrastructure List and the development plan.

5.4. TEST PROJECT DEVELOPMENT

The Test Project shall be composed based on the samples provided on the WSR forum (http://forum.worldskills.ru). For text documents, use templates in Word format.

5.4.1. WHO DEVELOPS TEST PROJECTS/MODULES

The test project development team consists of:

- Skill Competition Manager;
- Chief Expert;
- Deputy Chief Expert;
- Certified skill competition experts.

When introducing 30 % of changes into the Test Project, the above referenced people shall be guided by the principles of objectivity and impartiality. The changes shall not affect the test project complexity or relate to other professional areas not described in the WSSS, as well as exclude any WSSS units. Furthermore, the introduced changes shall be performable using the infrastructure list approved for the competitions.

Proposals can be submitted to the development team on the WSR forum (http://forum.worldskills.ru) by all Experts.

The sponsors cannot affect the test project development in any way.

5.4.2. WHO DEVELOPS THE TEST PROJECT/MODULES

Test projects for each competition are developed based on the unified Test Project approved by the Skill Competition Manager and posted on the Discussion Forum. Test projects can be developed both in their entirety or in modules. The Discussion Forum is the main Test Project development tool.

5.4.3. WHEN IS THE TEST PROJECT DEVELOPED

The Test Project is developed in accordance with the following schedule:

Time frames	Local competition	Qualification competition	National competition
Test Project template	The test project of the previous National Competition shall be taken from the Discussion Forum in the unmodified state.	The test project of the previous National Competition shall be taken from the Discussion Forum in the unmodified state.	It is developed based on the previous competition taking into account the skill competition execution experience and the industry standards 6 months prior to the competition
Approval of the Chief Competition Expert responsible for the TP development	2 months prior to the competition	3 months prior to the competition	4 months prior to the competition
TP publication (if applicable)	1 month prior to the competition	1 month prior to the competition	1 month prior to the competition
Introduction and approval of 30% of changes into the TP by the Skill Competition Manager	On Day C-2	On Day C-2	On Day C-2
Submission of proposals on the Discussion Forum regarding the modification of TP, BD, IL, TD, EN, GR	On Day C+1	On Day C+1	On Day C+1

5.5 TEST PROJECT APPROVAL

The Skill Competition Manager, Chief Expert, Deputy Chief Expert or Technical Expert make a coordinated decision on the feasibility of all modules. Taken into consideration are time, workmanship of the competitors and materials.

The test project can be approved in any form convenient for the Skill Competition Manager.

The test project **is secret** and is accessible for familiarization to the experts on Day C-2, to the competitors on Day C-1.

5.6. PROPERTIES OF MATERIALS AND MANUFACTURER'S INSTRUCTIONS

In case in order to perform the test project a competitor require to become familiar with any material user manual or a manufacturer's manual, he or she will receive them in advance by the decision of the Skill Competition Manager or the Chief Expert. If required, during the familiarization, the Technical Expert can organize an on-site demonstration.

The materials selected for the modules to be built by the competitors (except for the cases where materials are brought by the competitors themselves) shall belong to the type of materials available from a variety of manufacturers and can be bought freely in the region of the competition.

6. SKILL MANAGEMENT AND COMMUNICATION

6.1 DISCUSSION FORUM

All pre-competition discussions take place on a special forum (http://forum.worldskills.ru). The decisions on skill development shall only be made after a preliminary discussion on the forum. Also the notification on all important events relevant to the skill shall take place on the forum. The forum is moderated by either the Skill Competition Manager or the Chief Skill Competition Manager.

6.2. INFORMATION FOR COMPETITORS

The information for competitors is published in accordance with the Standing Orders of the carried out competition. The information can include:

- Technical description;
- Test projects;
- Mark Summary Form;
- Infrastructure List;
- OHSE Instruction;
- Additional information.

6.3. ARCHIVE OF TEST PROJECTS

The test projects are available at http://forum.worldskills.ru.

6.4. DAY-TO-DAY MANAGEMENT

Day-to-day management is carried out in accordance with the approved Workshop Operation Plan by a special team led by the Chief Expert. The Workshop Operation Plan shall be developed 2 months prior to the competition and approved by the experts directly at the competition.

7. SAFETY REQUIREMENTS

7.1. OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS OF THE COMPETITION

Refer to the OHSE documentation provided by the Competition Organizing Committee.

7.2 SKILL-SPECIFIC OCCUPATIONAL HEALTH AND SAFETY AND ENVIRONMENTAL REQUIREMENTS

Applied are the standard computer health and safety rules. Organization of work in the "14+" age group workshop is regulated by SanPiN 2.4.4.3172-14

"Sanitary and Epidemiological Requirements to the Arrangement, Content and Organization of the Working Schedule of Extended Children Education Establishments", approved by the Resolution of the Chief Sanitary Inspector of the Russian Federation No. 41 dated July 4, 2014.

8. MATERIALS AND EQUIPMENT

8.1. INFRASTRUCTURE LIST

The infrastructure list includes everything necessary for the performance of test projects. The competition organizer complements the list with an exact amount of necessary materials, their features, models and brands. The infrastructure provided by the organizer is included in a separate list.

Before each competition, the experts are required to check and correct the list, as well as to coordinate it with the WSR Technical Director.

At each competition, the Technical Expert should maintain accounting of infrastructure elements. The list should not include elements that were asked to be included by the experts or the competitors, as well as prohibited elements.

8.2. MATERIALS, EQUIPMENT AND TOOLBOX TOOLS

The competitors can use hearing protection.

The competitors are allowed to bring their own keyboards, mice and mouse pads. All brought keyboards, mice and pads shall be given to the Technical Expert for inspection in advance. The use of wireless keyboards and mice is prohibited. Input devices shall be non-programmable.

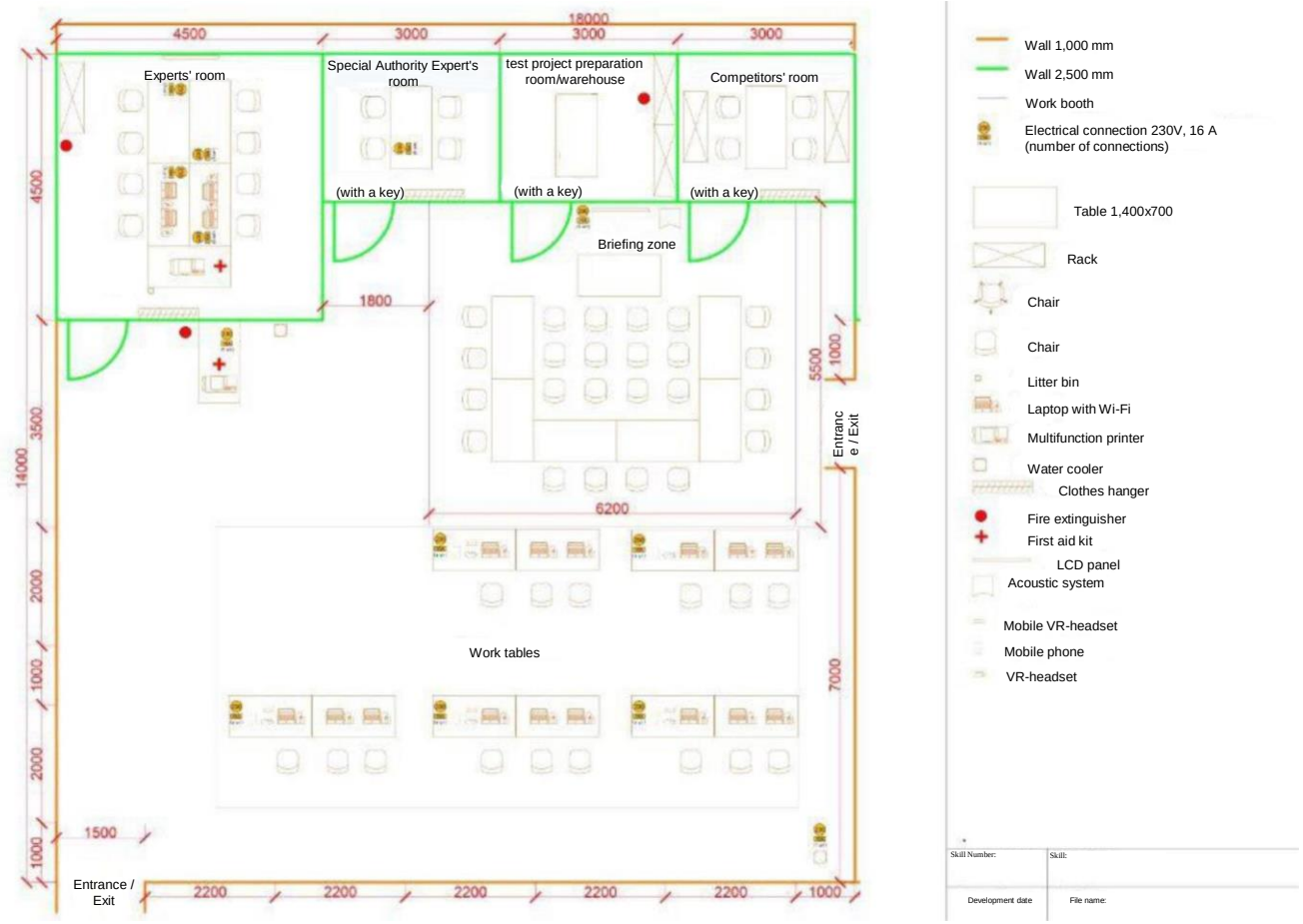
8.3. MATERIALS AND EQUIPMENT PROHIBITED AT THE WORKSHOP

1. It is prohibited to use any data storage devices not issued at the workshop.

2. It is prohibited to use own equipment (laptops, VR-headsets, phones).

8.4. PROPOSED COMPETITION WORKSHOP LAYOUT

The competition workshop layout shall be provided by the organizers.



9. SPECIAL SKILL RULES

Rules for specific competitions cannot contradict or take priority over the Competition Rules. They shall describe specific elaborations and clarifications in areas which can be changed between competitions. They include but are not limited to personal computing equipment, data storage devices, Internet access, work procedures and routines, as well as documentation management and distribution.

TOPIC/TEST PROJECT	SPECIAL SKILL RULES
Use of technology — USB, memory cards	• The competitors are allowed to use only the memory cards provided by the competition organizer. It is prohibited to insert any other memory cards into the competitors' computers. • It is prohibited to take memory cards or any other portable storage devices outside of the workshop. • Memory cards or other portable storage devices shall be presented to the Chief Expert in the end of each day for safe storage, they are not allowed to be taken outside of the workshop.
Use of technology — personal laptops, tablets and mobile phones	• The competitors are prohibited from bringing personal laptops, tablets and mobile phones into the workshop. • The experts and interpreters are allowed to use personal laptops, tablets and mobile phones in the Expert's room. Personal laptops and tablets can be taken outside of the workshop at nighttime.
Use of technology — personal photography and video recording devices	• The competitors, experts and interpreters are allowed to use personal photography and video recording devices at the workshop, but are not allowed to take any photographs of detailed test project information or marking forms.
Records	• The competitors can take notes while present at the workshop, however they cannot be taken from the workshop.
Equipment failure	• If there is a clear proof that the competitors have caused damage to the equipment on their own, they will not be provided with a replacement and additional time.
Health, Safety, and Environment	• Refer to the WorldSkills Health, Safety and Environment Policy and the Guideline Document.
Competitor monitoring	• The competitors should be monitored at all times during their work. In case an expert responsible for monitoring needs to leave, he or she shall take actions to be replaced by another expert. • The experts are not allowed to monitor their compatriot competitors. • The experts and interpreters are allowed to enter a workstation only if it is approved by the Chief Expert or the Deputy Chief Expert. The only exception to this rule is the need to stop a competitor for reasons related to OHSE.

10. VISITORS AND MEDIA ENGAGEMENT

Below is the list of possible ways to maximize the degree of engagement of visitors and media.

- "Try Yourself in Action".
- The zone located near the competition venue and controlled by local students where the youth can become familiar with VR and AR capabilities directly.
- Display screens.
- Test project description.
- Test projects or their parts can be displayed near the "Try Yourself in Action" zone.
- Competitors' profiles.
- The competitors' profiles can be displayed on the screens located near the competition venue. Useful information:
- name;
- age;
- country of origin;
- type of training;
- type of actual activity;
- information on the choice of professional training by the competitors.
- Career opportunities.
- The information can include:
- brochures;
- advertising leaflets;
- informers (young students).
- Daily reporting on the competition status.

The daily report can be used if all competitors are working on the same module on the same day.

11. ENVIRONMENTAL PROTECTION

- Recycling;
- The possibility of transferring all materials and equipment to local colleges for their use in the educational process shall be considered;
- Use of green, environmentally-friendly materials;
- Use of finished test projects in colleges in the educational process;
- The test project development groups shall lay special emphasis on environmental issues when composing the test project;
- All paper documents prepared during the previous competition should be converted into soft copies. This is a responsibility of the Chief Expert or the Deputy Chief Expert.

12. SPECIAL RULES FOR THE 14-16 AGE GROUP

The test project performance time shall not exceed 4 hours a day.

During the development of the Test Project and the Marking Scheme, it is required to consider the specific features and the limitations of the applied OHSE rules for this age group. It is also required to take into account anthropometric, psychophysiological and psychological characteristics of this age group. This way the Test Project and the Marking Scheme can cover not all of the WSSS units and fields depending on the specific features of the skill.