BTS Bioengineering

NIRVANA

MOTOR AND COGNITIVE NEURO-REHABILITATION SYSTEM

NIRVANA

WHAT IS NIRVANA?

NIRVANA is a medical device based on virtual reality, specifically designed to support motor and cognitive rehabilitation in patients with neuromotor disorders.

It speeds up the rehabilitation process by supporting the therapists' choices on the most appropriate activity for the recovery of every patient's impaired motor function.

NIRVANA is a completely non-invasive system functioning in a realistic environment. It uses neuro-sensory stimulation and adapts the level of difficulty of each exercise to the patient's newly acquired abilities, in real time.

STRENGTHS

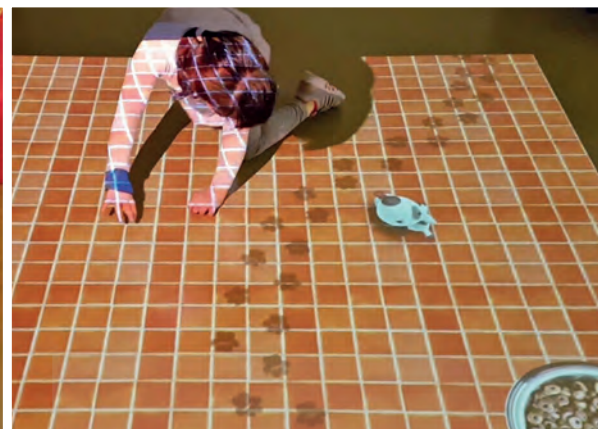### IMMERSIVE EXPERIENCE AND TOTAL FREEDOM OF MOVEMENT

It's the only completely immersive system giving the patient total freedom of movement, which does not require the use of visors, gloves or other sensors.

DIRECT INTERACTION WITH THE VIRTUAL ENVIRONMENT

It's the only system allowing the patient to directly interact with the virtual environment around him/her without the use of a simulator (Avatar), which normally causes the neurological patient to drift away from reality and can possibly cause psychological problems like anxiety, phobias and stress, thus invalidating the benefits obtained by the rehabilitation exercise.

COGNITIVE AND MOTOR REHABILITATION

It's the only system using a single device for the rehabilitation of the whole body (head/neck, upper limbs, trunk and lower limbs) as well as cognitive rehabilitation.

HOW IT WORKS

SCENERIES THAT RESPOND TO THE PATIENT'S ACTION

By projecting different sceneries on walls or floors, settings are created and the patient interacts with the stimulus provided by the scenery; a motion analysis device detects the patient's behavior and adjusts the projected environment providing an audio/visual feedback.

PROGRESSES CAN BE MEASURED IMMEDIATELY AND OVER TIME

During the exercise, the system measures and generates all significant indexes of the patient's progress in real time and subsequently creates a easy-to-use report.
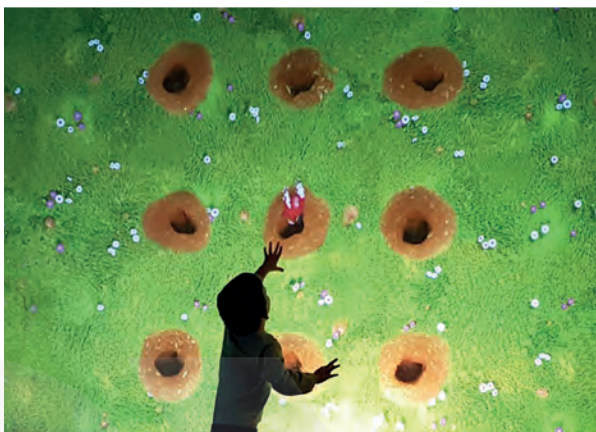
SEVERAL CUSTOMIZABLE CLINICAL EXERCISES

The system is preconfigured with a set of scientifically validated exercises, which can be customized and adjusted according to the level of difficulty, speed of performance and sensitive area (range of motion), to various patient categories.

IT CAN BE MANAGED THROUGH PC, TABLET AND SMARTPHONE

The system is controlled via a web-based interface compatible with all devices and operating systems.

MULTI-USER

It can be used by several users (physicians can prescribe exercises, assign patients and sessions to therapists and monitor treatments evolution from any location in the NIRVANA network).

WHY YOU SHOULD USE NIRVANA

IT AROUSES PATIENT PROACTIVITY

It will help you motivate the patient and encourage him/her to undergo the customized rehabilitation program, making the patient pro-active in performing the task. This approach allows the patient to test his/her performance success and increase his/her autonomy level while still maintaining the therapist's constant presence.

IT ALLOWS YOU TO ADJUST EXERCISES IN REAL TIME, CUSTOMIZING THEM TO THE PATIENT'S BEHAVIOR

It will help you monitor progress or difficulties during the exercise thanks to the monitoring of the patient's performance.
In turn, you'll be able to adjust parameters and customize the exercise helping the patient stay positive.

IT IMPROVES THE COMMUNICATION WITH PATIENTS

It will help you communicate with patients in a more effective way thanks to its precise, simple and complete reports; it will increase therapeutic reliability and improve the credibility and reputation of your rehabilitation center.

WHY YOU SHOULD BUY NIRVANA

PATIENT INVOLVEMENT

The patient feels motivated to undergo therapy and feels encouraged to perform the exercises.
Motivating and engaging therapy proves to be more effective resulting with better outcomes in less time.

SUITABLE FOR ALL PATIENTS

It adapts to the treatment of several conditions and it can also be used by patients carrying walking aids (crutches, walkers, tripods) or patients using wheelchairs.

MANY PATIENTS, ONE THERAPIST

By using it, more patients will be rehabilitated simultaneously and under the supervision of a single therapist.
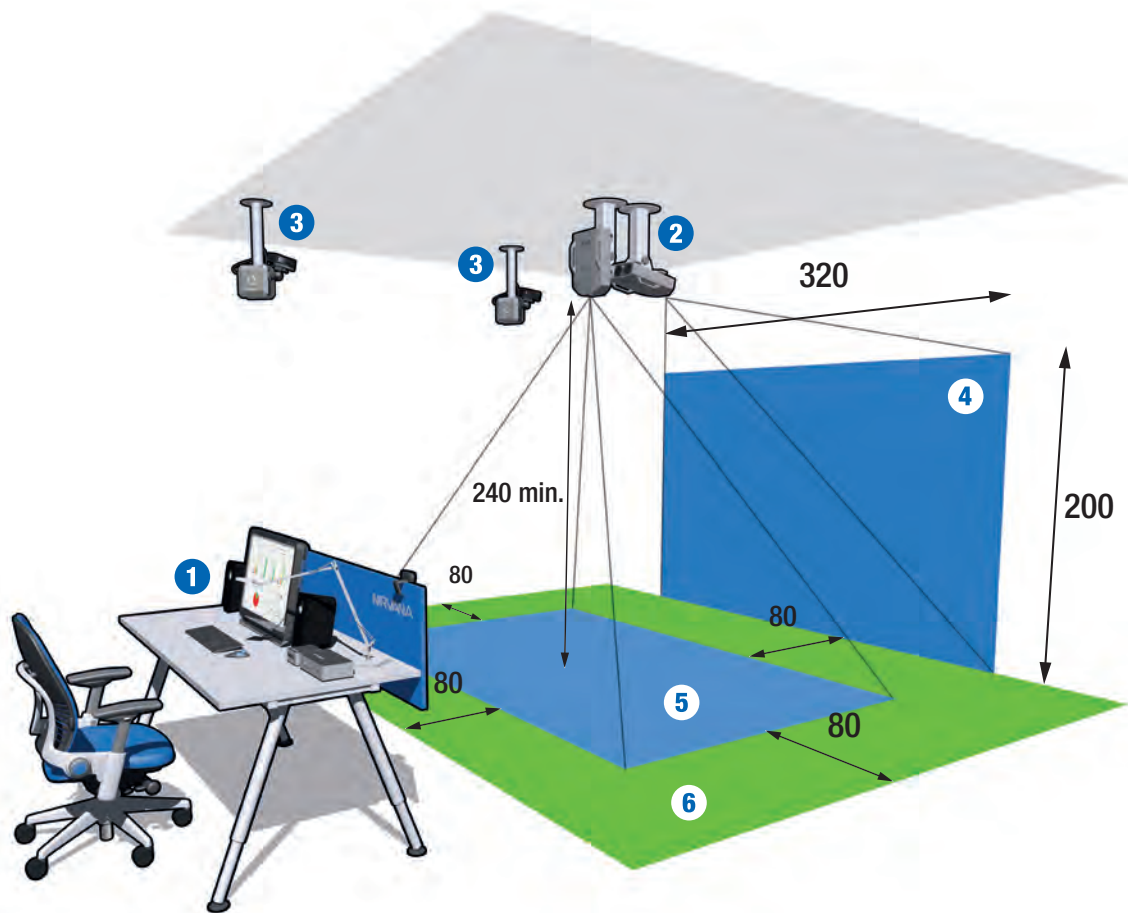
A STEP FORWARD

It will renew the image of your rehabilitation center aligning technological innovation to the best clinical tradition.

READY FOR YOUR CENTER

It can be adapted to and configured for any kind of space and it's also affordable: every rehabilitation center should have its NIRVANA SENSORY ROOM, even if other devices are already in place.

CREATE A **NIRVANA SENSORY ROOM** IN YOUR CENTER:
NO ADDITIONAL SPACE REQUIRED, EASY TO INSTALL AND USE

320

240 min.

200

80

80

80

80

1

2

3

3

4

5

6

The NIRVANA SENSORY ROOM doesn't require a dedicated space for it. Sensors and projectors don't occupy floorspace. Existing facilities can be moved temporarily in order to allow the execution of the exercises.

1 **Workstation**
Control unit and elaboration unit can be placed on a table of small dimensions.

2 **Digital video projectors**

3 **Movement detection units**
can be fixed on walls or ceiling.

4 **Wall projection surface**
Recommended dimensions 320x200 cm.
For the background, it is possible to use either a white wall or a standard projection screen. Furthermore, if the spaces allow you to use a rear projection screen then it is also another viable solution.

5 **Floor projection surface**
Recommended dimensions 320x200 cm.
The image can be projected directly on most existing floors without the adoption of reflective carpets (a light color for them is recommended).

6 Free area for the execution of the exercise.

NIRVANA SENSORY ROOM KIT, NOW AT

ASK FOR SPECIAL LAUNCH QUOTATION
e-mail: office@askmed.ch

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