PRESENTATION
UNDERGROUND SUGAR

ART & NEWS TECHNOLOGIES
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UNDERGROUND Sugar creates and designs immersive and interactive experiences, augmented shows that blend the performing arts and new technologies.

Since 2016, Underground Sugar has been accompanying artists and exploring creation as a space for sensitive experimentation. We bring stories to life, and imagine new immersive and interactive experience designs for all audiences.

+ Augmented shows

+ Interactive scenography

+ Real-time motion capture

+ Collective and mobile Virtual Reality

+ Video mapping

+ Immersive film

+ Sound installation

E.MOTION

The experience plunges young and old into the heart of an immersive tale
with 3D puppets animated in real time

Audience: General public, Young people, Families

Format: Theaters

Genre: immersive storytelling with 3D puppets and real-time motion capture

Duration: immersive theater version (55mn)

Language: French, English

Capacity: up to 800 people (depending on venue capacity)

A show written by Axel Beaumont
Concept and direction: Julie Desmet Weaver
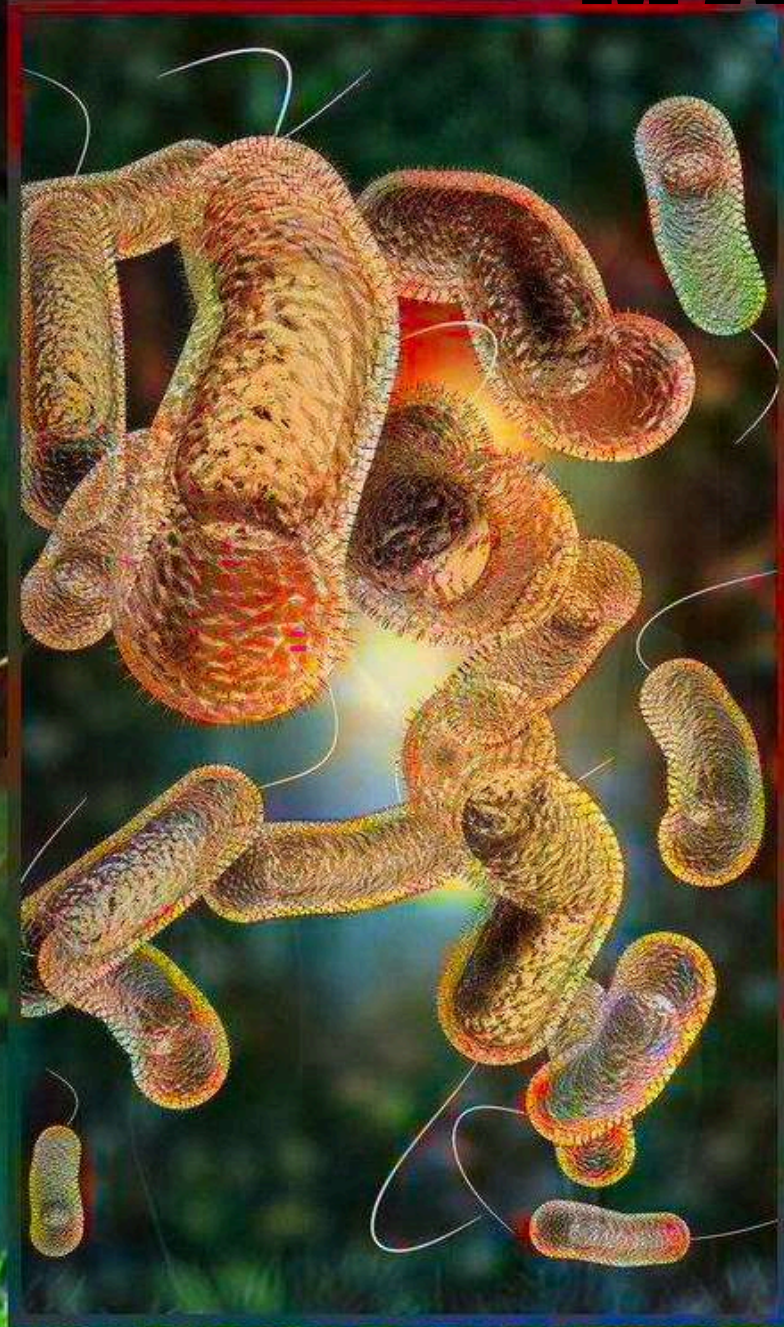Visual set design : Alain Lagarde

Motion Capture: Poll Pebe Pueyrredon
3D Graphic Designer: Léo Ewald
Lighting Designer: Fouad Souaker

With Léa Tuil or Laura Wohlwend
And Axel Beaumont
On screen, Margot as the little girl.

MAKING OF - E.MOTION

THE GARDEN

A scenography that unfolds via living, interactive images projected onto three mobile screens on rails, in which the four digital avatars_3D puppets come into play.

Unlike the ultra-realistic special effects used in cinema, our images are animated in real time by the actors, using innovative devices to create a kind of poetry unique to the theater.

STORY

A Little Girl has a phenomenal imagination.

Passionate about science, she reads books on astronomy, and is also a great connoisseur of biology, creating chimeras. She escapes by exploring space and visions of the world that stretch from the infinitely small to the infinitely large.

This same Little Girl has a mother who disappears, and tears that don't come: eyes as dry as a desert.

It's then that the Little Girl invents herself Big Little Girl, and another reality opens up to her: a world projected 3000 years into the future, filled with surprising chimera characters... new species, half-animal, half-plant, that she finds very interesting.

Soon, new alchemies are at work within her: a metamorphosis.

THE CHARACTERS
4 AVATARS
3D PUPPETS

S'TRUC

Half Chameleon - Half Lemur, this animal loves to scare, prank and excel. It's because it's small and fearful that it feels the need to assert its power.

BIDUL'

Half Frog - Half Turtle. This earthy character represents self-confidence and the need for protection. His shell protects him from the dangers of the big world.
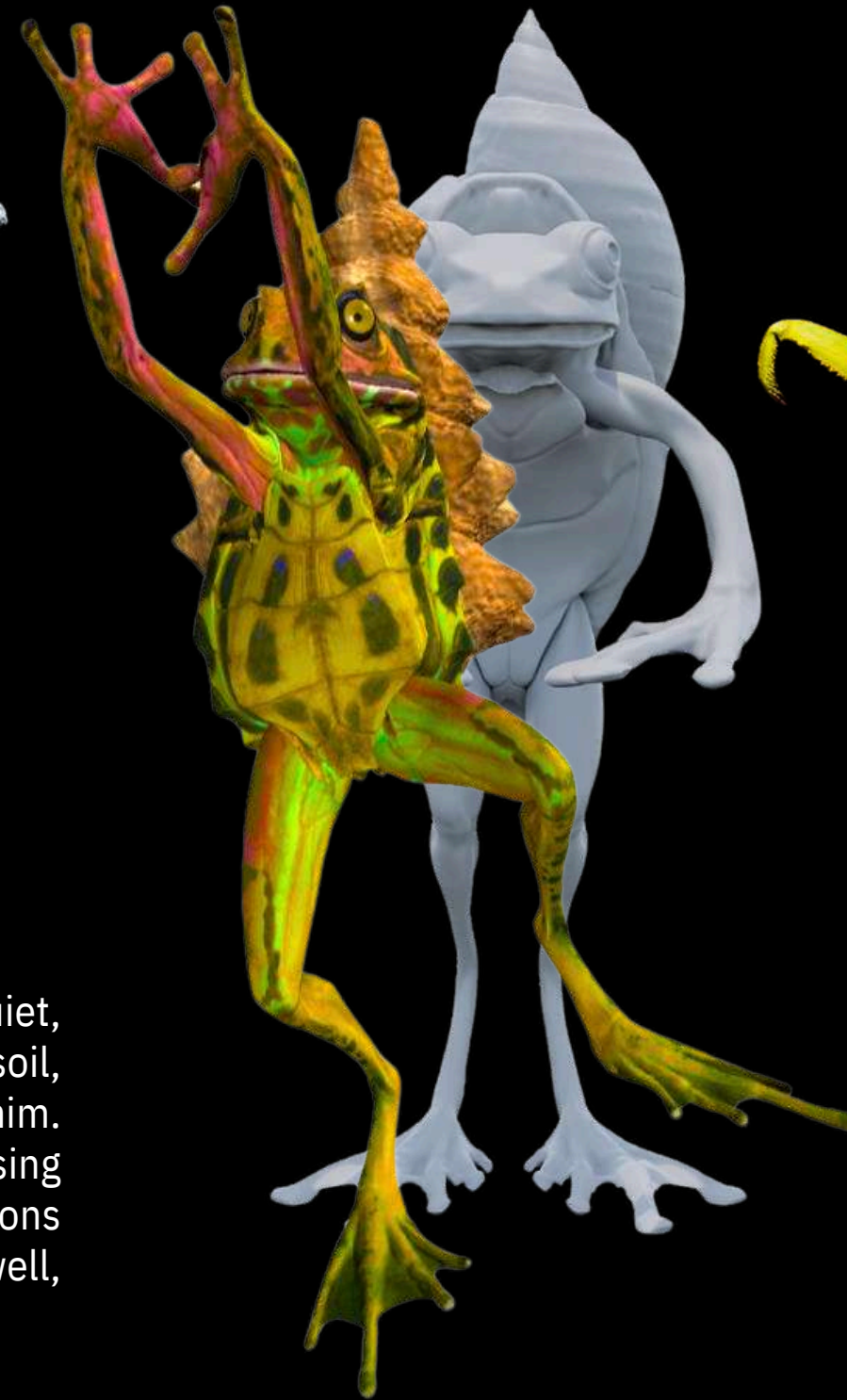
CHOZ'

Half Mushroom - Half Fish.
Choz lives in humid areas, and is a quiet, resilient force, rooted in the soil, adapting to the world around him. However, he has difficulty expressing what he feels. He keeps his emotions bottled up, and all this makes him swell, swell, really swell.
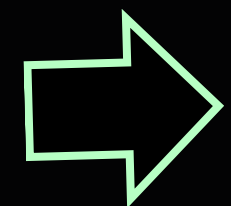
CRISPER'

Half Okapi - Half insect. This animal floats in the air. It's very angry, raging at everyone and rejecting everyone: it complains a lot. This rage isolates him, and prevents him from making friends.
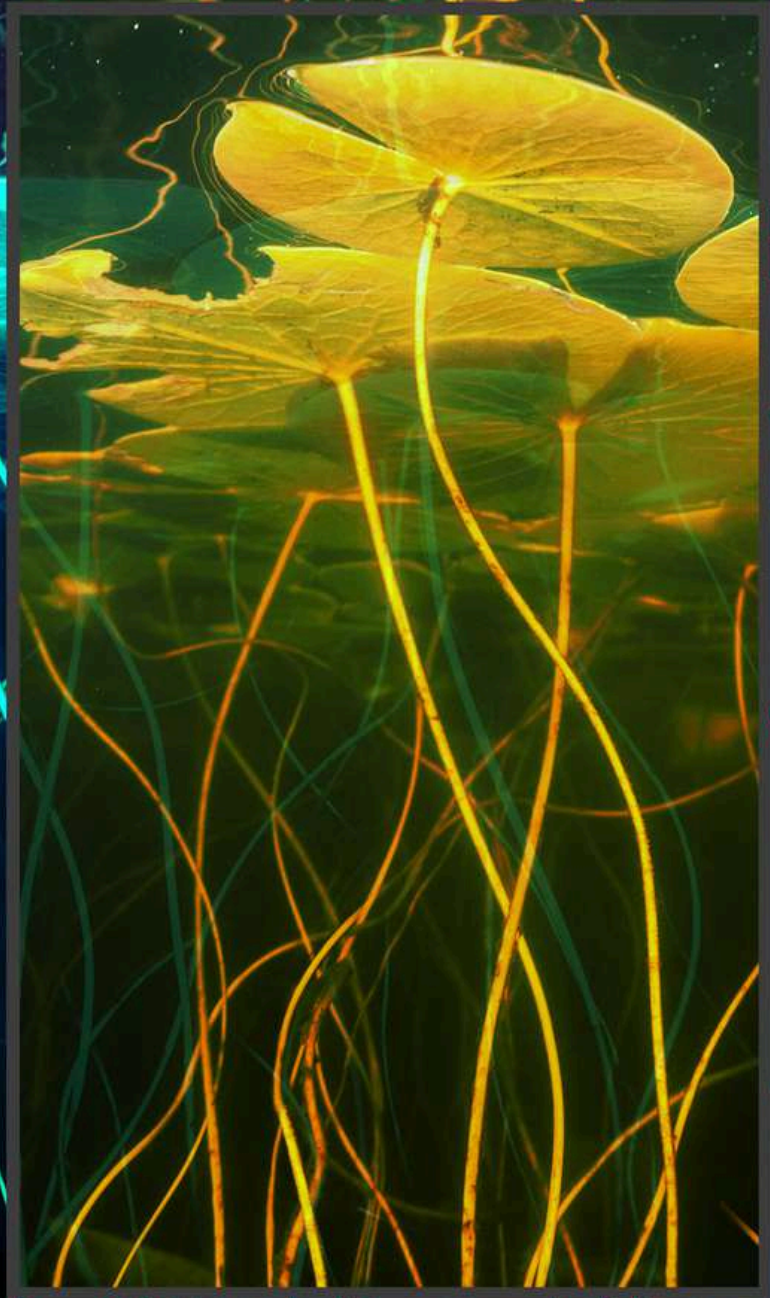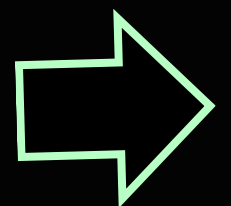
Le jardin laboratoire

Le désert de sel

You'll discover the laboratory garden of a little girl with a passion for science. She introduces you to Bidul', a little half-frog, half-snail. Together, you explore a world that's infinitely big and infinitely...microscopic.

A storm breaks: the little girl learns that her mother has disappeared. Faced with this tragedy, she decides never to cry again, never to feel anything.
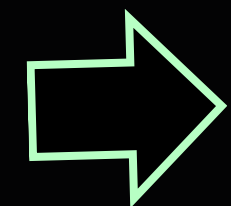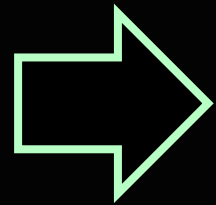
The very tall little girl turns in circles, desperately seeking a path. The world has become a desert, yet you feel you're being watched: S'truc, a half-lemur, half-chameleon creature lurks in the background. Hurry! You only have a few seconds to find its hiding place... Soon, under the shaking earth, a way out appears!

Les montagnes noires
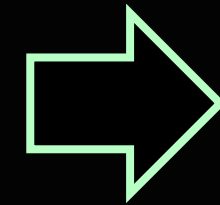

Prairie de coquilles brisées

You glide slowly along and touch the bottom of the phosphorescent water. Behind the luminescent water lilies rises Choz', a rotund half-fish, half-mushroom who can't seem to shake the big tsunami of sadness in his heart. They're little bubbles of effervescent laughter that bring you right up to the surface.
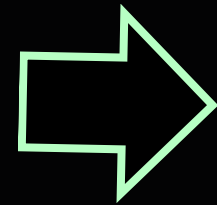
Atop a volcanic cliff with geysers of smoke, Crispe'R, half-okapi half-insect, reigns as tyrant. The tall little girl has to move forward, whatever the cost, and faces her wrath in the face of the winged giant, who suddenly shrinks like a micro-microbe.

Walking through a seashell meadow, a voice calls softly: you've found Bidul'. This encounter with the past overwhelms the tall little girl. Back in her childhood bedroom, close to her father, she finds the comfort of shared memories, and the promise of new stories to tell.

MICROSCOC
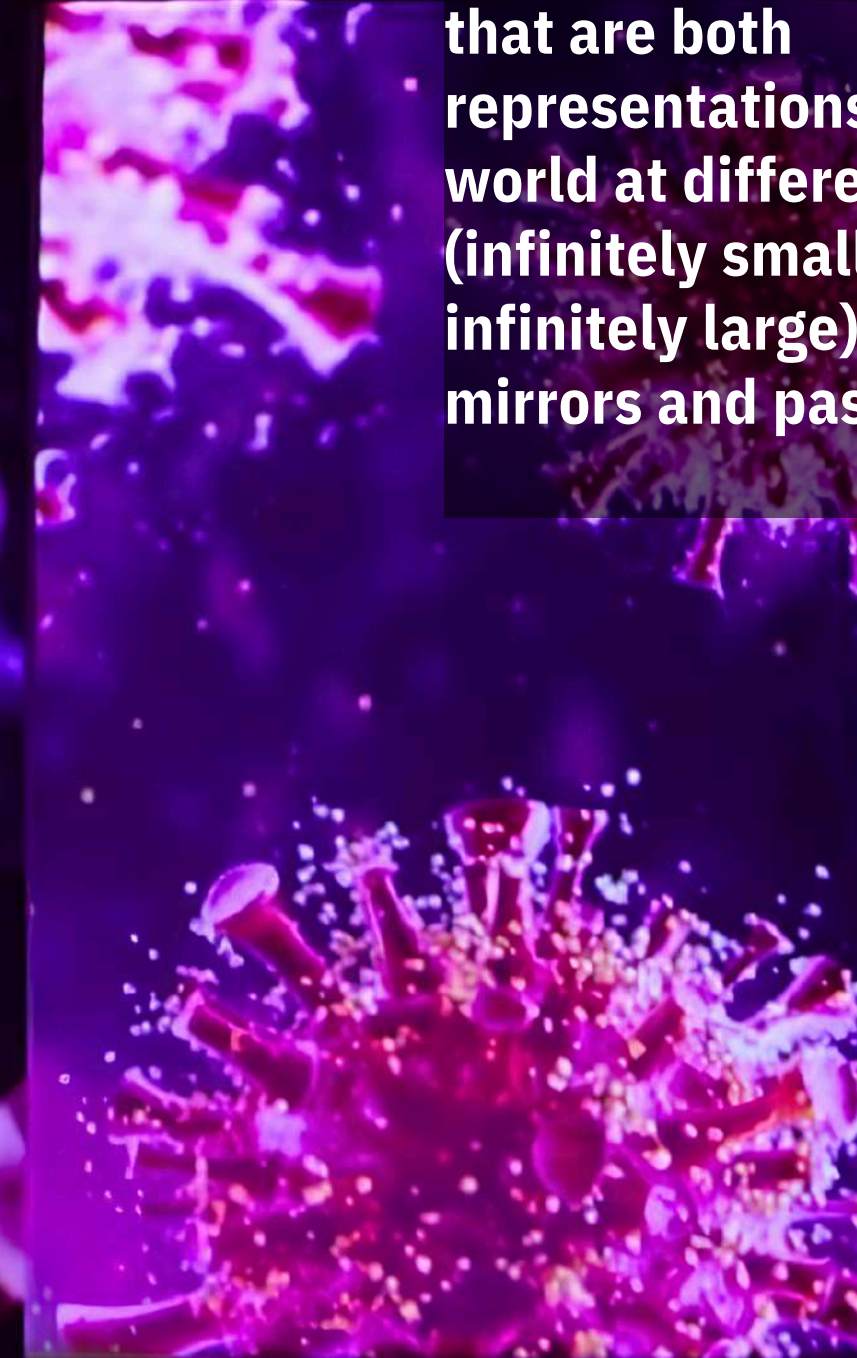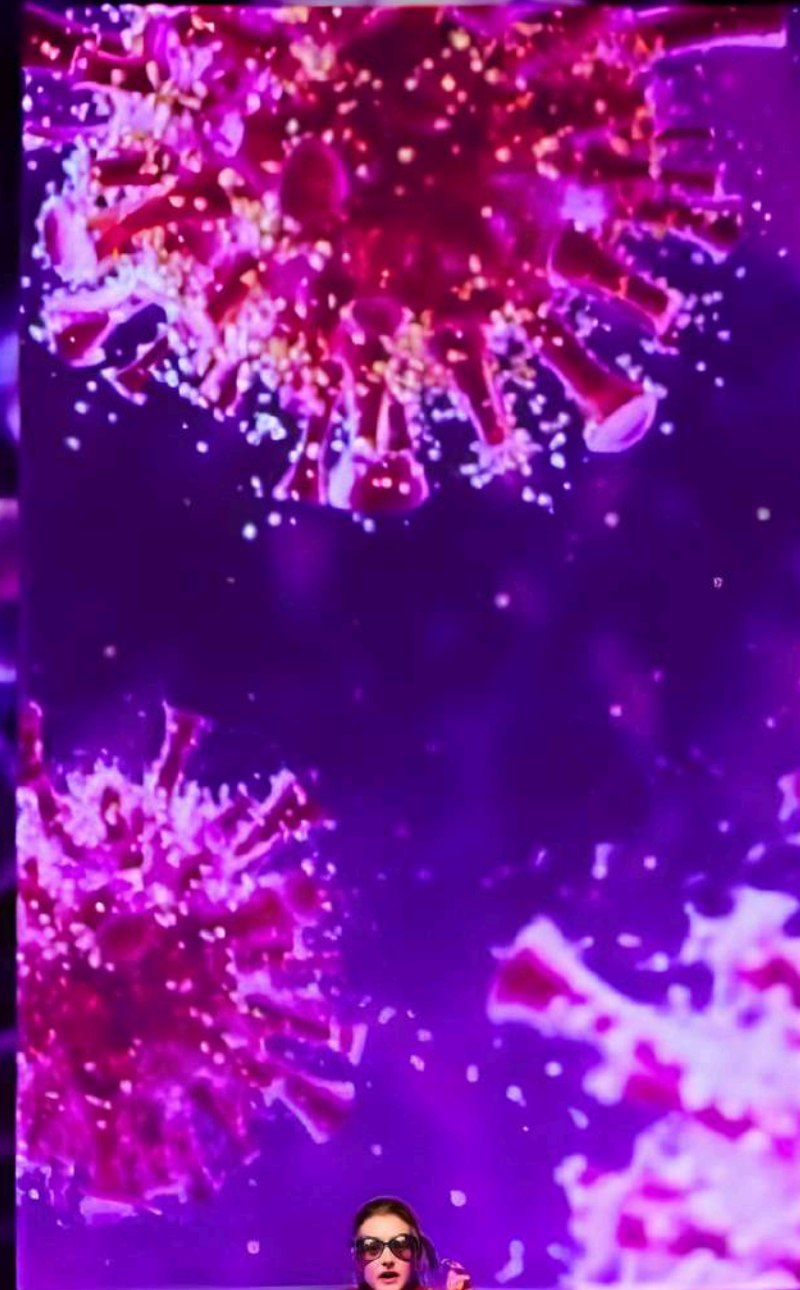
The big little girl comes into play with mobile screens that are both representations of the world at different scales (infinitely small and infinitely large) and also mirrors and passageways.

WATERLILIES

AUTHOR'S NOTE
Axel Beaumont

When I started writing the story of this little girl, I wanted to evoke those childhood scenes. I wanted to evoke those childhood scenes: those hours spent stargazing, watching ants scurry by, collecting pebbles and shells... I wanted to talk about this extraordinary playground for the imagination, and about what it means to discover the world through the eyes of a child particularly fascinated by life, nature and space.

My dramatic tipping point prompted me to question what the loss of a loved one means to a child who is emotionally developing at the same time as she discovers the world. When the little girl learns of her mother's death,

she starts to grow up, suddenly, much too fast, and makes a promise to herself never to shed tears again so as not to feel anything.

My aim was to depict the inner journey of this "big-little" girl, who gradually learns to reconnect with her emotions. Mourning, denial and resilience in the face of loss, narrative and psychological issues are explored through a number of themes. The dialogues and interactions with all the imaginary characters illustrate the complex process of emotional reopening and the path to healing.

"I wanted to write a profound and amusing fable about those invisible alchemies that magically take place within us and transform us forever."

REALIZATION NOTE
REAL SPACE / VIRTUAL SPACE

Julie Desmet Weaver

When I began work on E.MOTION, I wanted to offer an experience amplified by mocap, and the animation of 3D puppets in real time. In this context, the first scenic model created with its screens on moving rails was a fundamental step.

My research into E.MOTION has pushed me to invent relevant narrative and visual bridges between the real and virtual worlds.

In particular, I worked to harmonize the performance of the actors on stage with the images mapped in space, and to orchestrate the movements of the 3D cameras.

Virtual cameras give me the latitude to play with points of view, scales and perspectives, inventively channeling the spectator's attention in a 360° space.

Our major challenge in this immersive tale is to encourage spectators to enter into play with the environment projected around them and the 3D puppets.

In these panoramic environments, I want to create synesthetic spaces, further blurring the boundaries between actors, audience, real and virtual spaces.

"It's amazement that's the trigger, because it opens wide the doors of the imagination."

VISUAL CREATION
IMMERSIVE SCENOGRAPHY

Alain Lagarde

Visual Conceptor and scenographer (la *Comédie Française, Opéra, Comédie Musicale)*

When I discovered the script for E.MOTION, I quickly thought of Gaston Bachelard's poetic imaginings, and it was from these reading memories that I first built Choz's universe: from the clear, brilliant waters of the water's surface, to the dark depths, where the mythologies of fairy tales lie.

For the other three elemental universes, I set out to create landscapes of wonder, such as the salt deserts of the Atacama in Chile, or the high-altitude lakes of the Andes mountain range.

We're now tackling an even more immersive dimension. For this new stage, I'm committed to deconstructing the usual systems of perspective representation, with the classic stacking of ground, landscape and sky.

These new spaces of the imagination allow us to abolish the reality of a physical space, to privilege only the experience of a breath of wind, the undulating sensuality of water-lilies, the twirling course of tumbleweed in the desert.

Seeing how the actor's movements are transformed via the 3Dquellette and projected, in real time, into the narrative universe is an essential part of the performance.

MOCAP REAL-TIME CONTROL PLATFORM

Build bridges between live performance tools, video games (unity or unreal) and motion capture software.

Our mocap control platform has stabilized a computer device capable of processing 3D information live for 1 hour. This processing offers low latency between the actor's actions and the projections in the immersive space.

At the heart of this platform is an ultra-fast computer network that connects: the motion capture unit, a computer dedicated to receiving and processing the actor's 3D movements, and a second computer that manages the projection of animated images and sound design in the immersive space.

The MoCap control platform is now operational for full 360° theater.

For immersive rooms, we work with the mapping software used on site.

To facilitate compatibility with immersive rooms, we add on top of the basic video layer, a real-time alpha video layer via an NDI (Network Device Interface) video output, compatible with most of today's multimedia servers. In the event of NDI incompatibility, an HDMI output and video capture card can be connected directly from our MoCap platform.

Thanks to our technical script, this video layer (with transparent background) is programmed in advance using the Cartesian coordinate system). This allows us to move our

YZ). In this way, we can move our 3D puppet and make it appear where and when we want during the show.

To enhance interaction between the 3D avatars and the various media (animated backgrounds, sound effects, music, etc.), command lines have been implemented.

These ensure fluid communication between the various software programs, managing positions, rotations and movements in the 3D universe.
We have developed visual signals and precise technical guidelines to maintain constant communication between the actor and the control room. These protocols anticipate and remedy any bugs during the show.

EMOTION BOX

ONDA - ECRANS VIVANTS

WORKSHOPS

OPTION 1

Welcoming school audiences
in the auditorium

between 100 and 150 children

On stage
the actress presents
the first 3D puppet

2 or 3 mediators
circulate with microphones

interactive exchange
with the 3D puppet
and children

OPTION 2

Small groups
3-5 people
are invited to enter the
EMOTION BOX

Interactive exchange
families
with various 3D puppets
on the theme of EMOTIONS

Capture + editing
of very short video formats

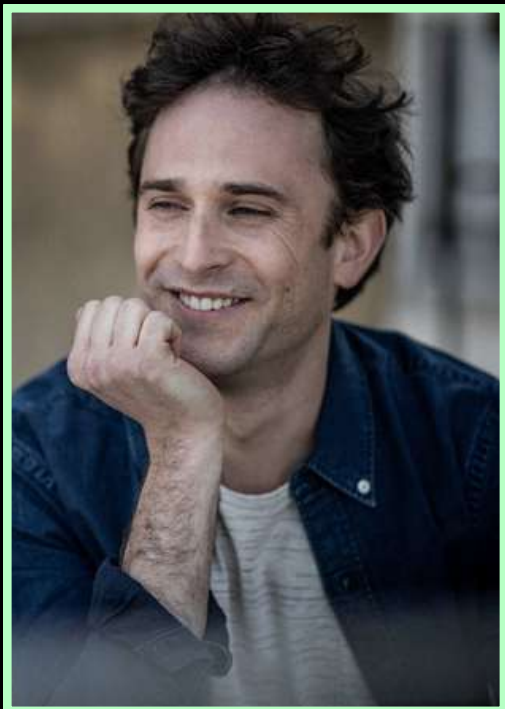Broadcast on social networks
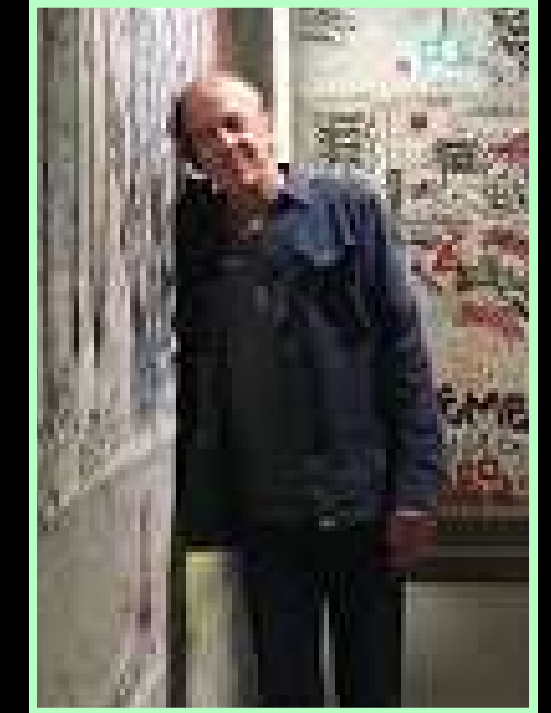theaters and event partners
partners

CREATORS

JULIE DESMET WEAVER
Director/immersive creator

Julie Desmet Weaver is dedicated to the exploration of new writing and new immersive and interactive scenic devices. She imagines creative processes that combine the performing arts and new technologies, and designs new experiences for audiences to initiate encounters around original stories. Her latest creation ENTREZ DANS LA DANSE was presented under the dome at the Théâtre National de Chaillot Paris, at the Palais Augmenté and on tour - Numix finalist montréal 2024. His two adaptations of L'ECUME DES JOURS, a performance and VR device, were awarded the SACD Ecriture multi-écrans prize, and received support from Europe's HORIZON 2020 program.

ALAIN LAGARDE
Visual conceptor/Scenography

After training as a set designer at the École du Théâtre National de Strasbourg from 1983 to 1986, he designed sets and costumes for numerous theater, dance and opera productions.

Among others: with Jacques Lassalle, he created the sets and costumes for Les Papiers d'Aspern (Henry James), the sets for Platonov at the Comédie-Française and Rue de Babylone (J.M.Besset). For dance, he designed the sets for Familiars du Labyrinthe at the Opéra Garnier, Demain for the Michèle Noiret company and the sets for the opera (…).

Recently, he designed the set for Richard II (Christophe Rauck) for the Théâtre de Nanterre.

AXEL BEAUMONT
Author/Actor

Axel Beaumont trained in theater at Studio d'Asnière, Paris. Since 2016, he has participated as an actor in hybrid creations directed by Julie Desmet Weaver such as l'ECUME DES JOURS, ENTREZ DANS LA DANSE.
Most recently, he interpreted director Mathieu Pradat's text in a collective virtual reality device: the project was presented at the Cannes XR Festival.
He co-wrote L'ELOQUENCE DES FLEURS (co-written with B. Hoguet, L. Ducré and J. Desmet Weaver), a project using A.I. In 2024, ONDES received writing support from the CNC for immersive creation, and will be in residence at the CDA d'Enghien.

fisheye Immersive

Du 7 au 24 juillet prochains, le Grenier à Sel présentera avec la quatrième édition des *Aires numériques* une programmation entièrement tournée vers les formes immersives et numériques au sein du spectacle vivant.

Cirque VR, théâtre avec motion capture ou lecture immersive et interactive avec IA... En marge du Festival d'Avignon, le Grenier à Sel profite d'*Aires Numériques* pour célébrer sous différentes formes le mariage du spectacle vivant avec le numérique. Car, disons-le tout net, il s'agit ici d'une union heureuse.

Pour en saisir toute la mesure, il suffit de s'intéresser à *E.motion, l'extraordinaire métamorphose*, un spectacle de théâtre avec marionnettes numériques 3D où la compagnie Underground Sugar poursuit son exploration de l'art digital à travers la présence d'un comédien équipé d'une combinaison de motion capture, chargé d'animer en temps réel les marionnettes.

théâtre(s)

DOSSIER / A LA REDECOUVERTE DES MARIONNETTES

NUMERIQUE UNE TECHNOLOGIE DU SENSIBLE

(...)

. .

OUVRIR LE CHAMP DES POSSIBLES

« *Quels que soient les outils, nous racontons des histoires. Mais le numérique ouvre des possibilités infinies* » sourit Julie Desmet Weaver. Elle est la metteuse en scène du spectacle **E.motion** écrit par Axel Beaumont, où l'on suit la trajectoire d'une petite fille qui fuit dans son monde imaginaire pour faire le deuil de sa mère. Sur scène, deux comédiens interagissent avec des écrans sur lesquels sont projetées des marionnettes 3D, animaux fantastiques produits de l'imagination fantaisiste de l'enfant _ et animées en direct par un comédien sur le plateau, grâce à une combinaison de capture de mouvement (ou motion capture) (...)

TECHNICAL SHEET

TEAM

1 stage director
1 stage manager
1 MOCAP video manager
2 actors

Running time: 55mn

SCENOGRAPHY

opening to frame minimum 8m backstage minimum 2m on each side minimum depth 7m + 1 circulation behind backdrop curtain height under pole 5m min / 8m max Italian-style pendrillonnage
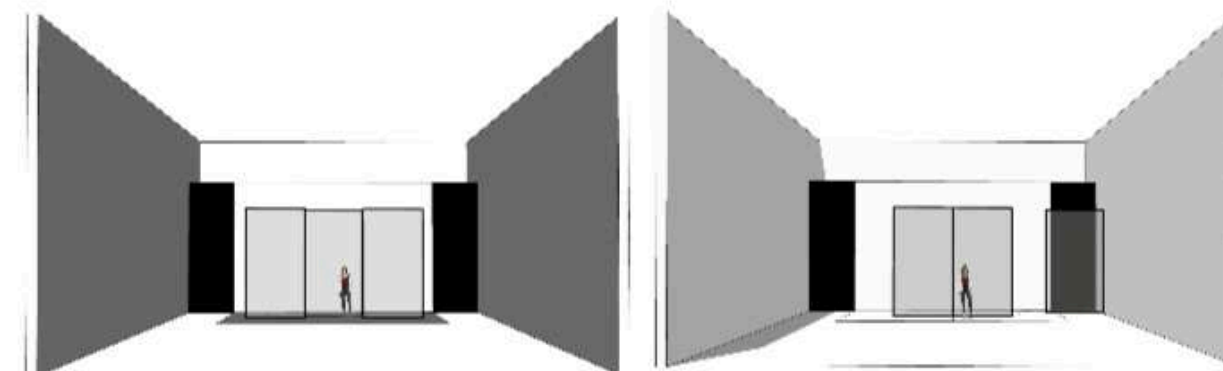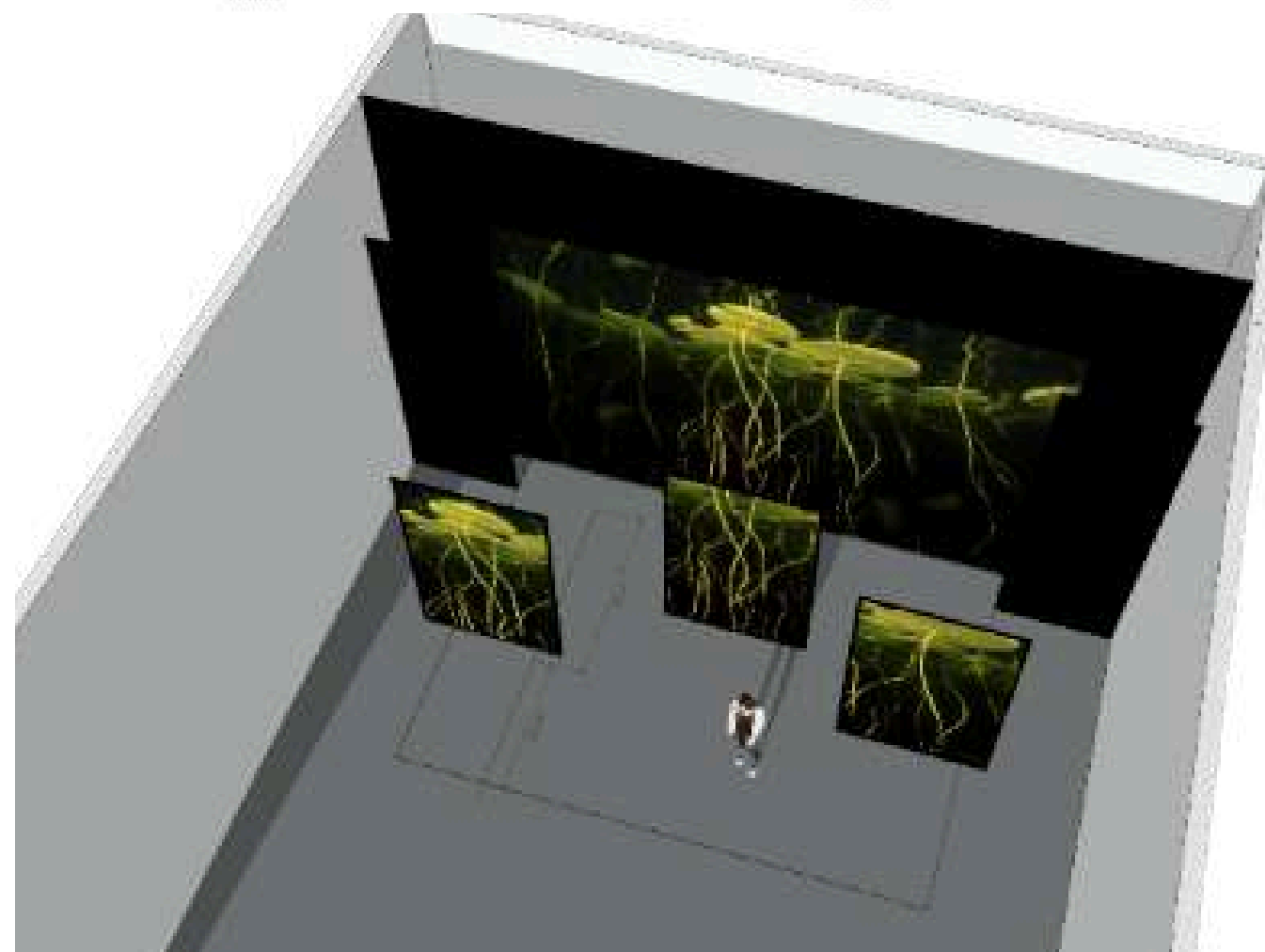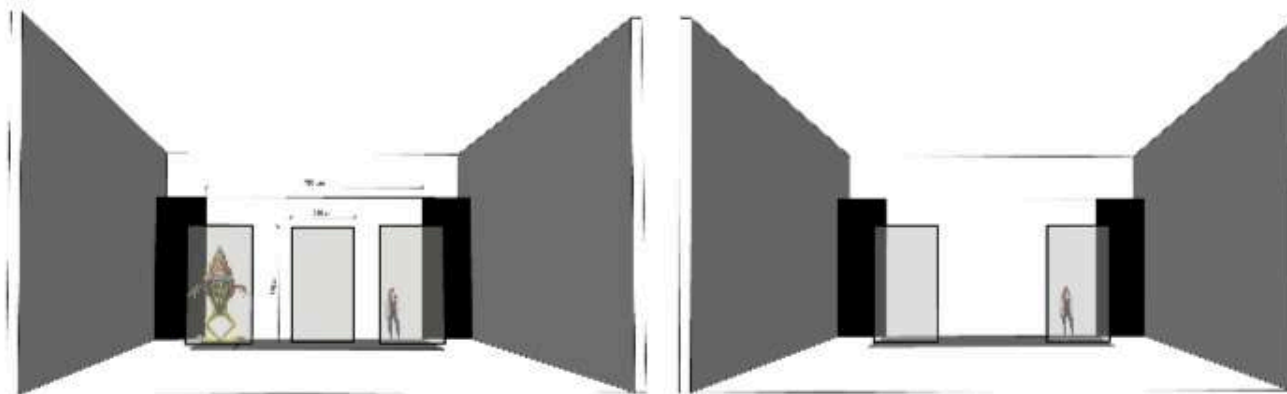
SCENOGRAPHY/STRUCTURE

(supplied by the company)
The set is composed of :
2 GERRIETS-type sliding stages supporting 3 suspended screen frames handled by the actors and stage manager.

For the version with rear-projection screen for the Big screen version, to be seen together.

LIGHTING

console ETC CONGO ou EOS (pas de ELEMENT2) avec les librairies des PAR LED utilisés 48 circuits 2kW ou 3kW 11 PC 1kW 12 PAR64 CP62 1 PAR64 CP61 10 découpes 614SX 6 PAR LED type MARTIN Rush PAR2 1 machine à brouillard type UNIQUE 2.1 avec ventilateur 1 machine à fumée lourde type Evolite Heavyfog 1200 (ou machine à carbo) consommable: gaffer aluminium filtres LEE FILTER 200 / 201 / 203 / 501 / 716 filtres ROSCO 119 / 132

SOUND

a complete broadcasting system (20Hz / 20kHz) adapté à la salle - une console numérique type LS9 / QL1 / X32 , etc - 2 retours 12 pouces sur pied (à jardin et à cour) - 2 micros HF serre-tête (1 couleur chaire et un noir) type DPA 6066 - 2 DI mono ou 1 DI stéréo

The company brings its computers and its MOCAP system

The organizer must provide:
- a full HD 1920 x 1200 WUXGA PANASONIC PT-RZ970 10,000lm min video projector with suitable optics depending on mounting possibilities - an RJ45 cat6 or SDI link - a pair of converters to HDMI - 2 HDMI cables 2m max (in control room and at the VP)