



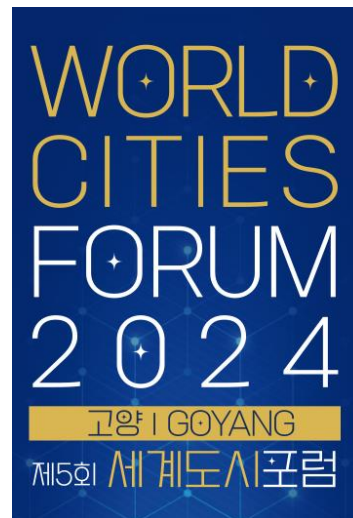
Fernando Vilariño

Associate Director Computer Vision Center - UAB

Director Càtedra UAB-Cruïlla



22nd October 2024
World Cities Forum 2024
Kintex, Goyang
Republic of Korea.



Càtedra **UAB** Universitat Autònoma de Barcelona **CRUÏLLA**



Prof. Fernando Vilariño

Associate Director – Associate Professor UAB

Master in Computer Vision:

Machine Learning

Degree Computer Sciences:

Robotics

Degree on Artificial Intelligence:

Social Innovation

Degree Smart Cities:

Open Innovation



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*Research on
Artificial
Intelligence (AI)*

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Artificial
Intelligence (AI)*

*Field of
Music and Arts*



- Public private initiative
- 600.000€ public funding
- 200.000€ private funding
- AI in the field of music and arts
- Development of industrial ecosystem
- Knowledge and talent transfer

LUNES

¡PRIMEROS ARTISTAS CONFIRMADOS DEL FESTIVAL CRUÏLLA 2025 Y CAMBIO DE PRECIO!

21 DE OCTUBRE





*"The life event as an ephemeral city,
a living lab mounted and unmounted in a few days,
with plenty of challenges to be solved by AI."*

*Which is an **acceptable AI**, from maximum standards of
research quality,
business model,
sustainability and
ethical principles of operation"*



IA-CREATE

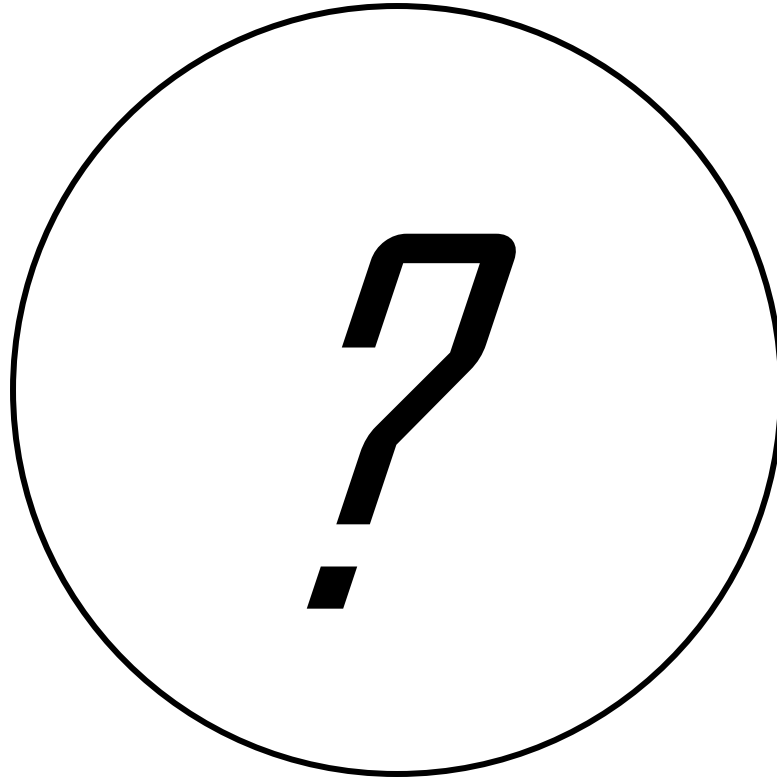
IA-SUPPORT

IA-EXPERIENCE

Research in AI (basic, oriented and applied)
is the core of innovation



We need driving questions





*Who is the
creator?*

Generative models for image and video





*What is the
beauty?*

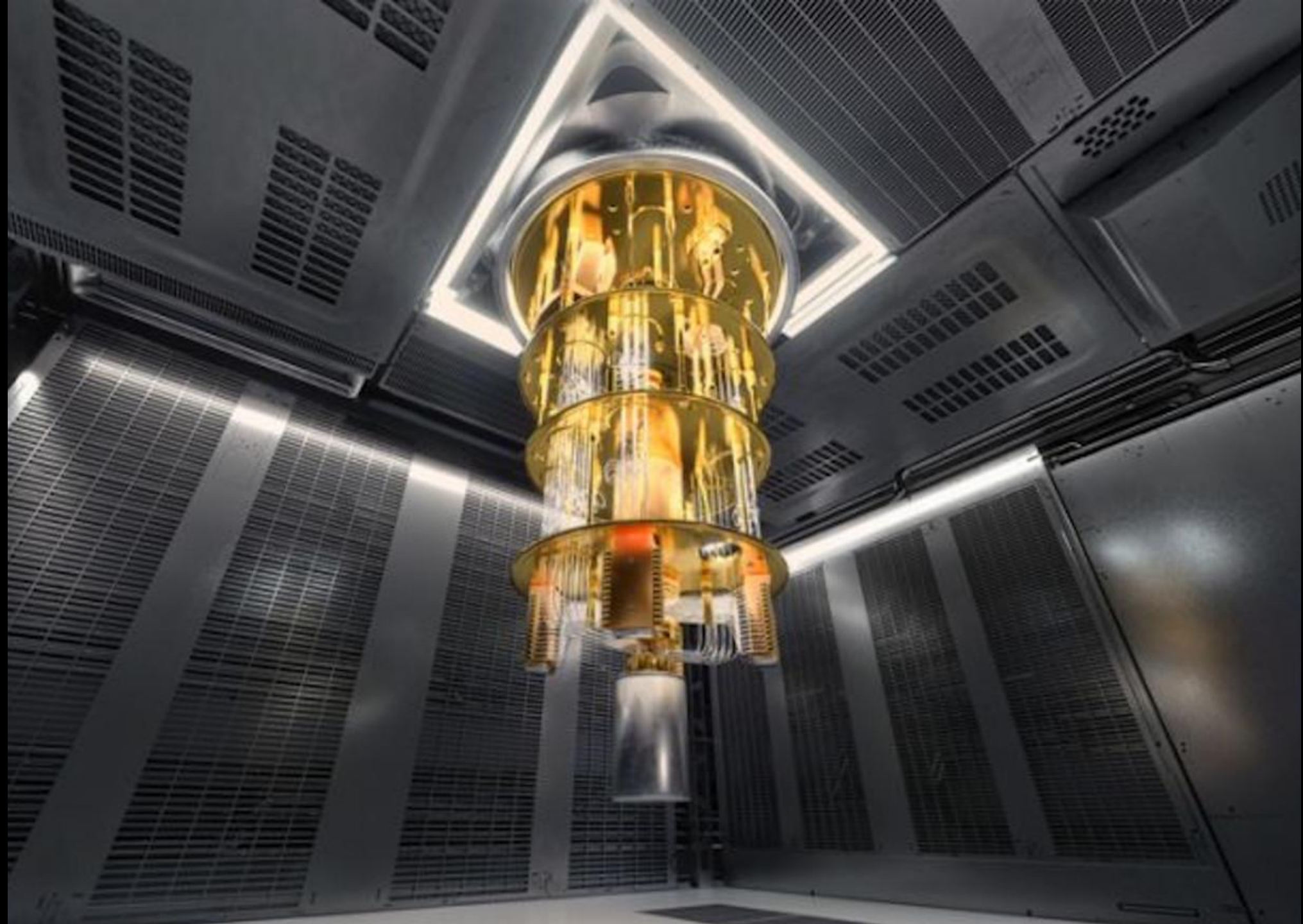
Computational Aesthetics





*What can we
compute?*

Quantum algorithms





*Can we augment
our experiences?*

Augmented reality





Re-valorising our cultural heritage?

Historical hand-written music recognition

Der Tag der ist so freudenreich

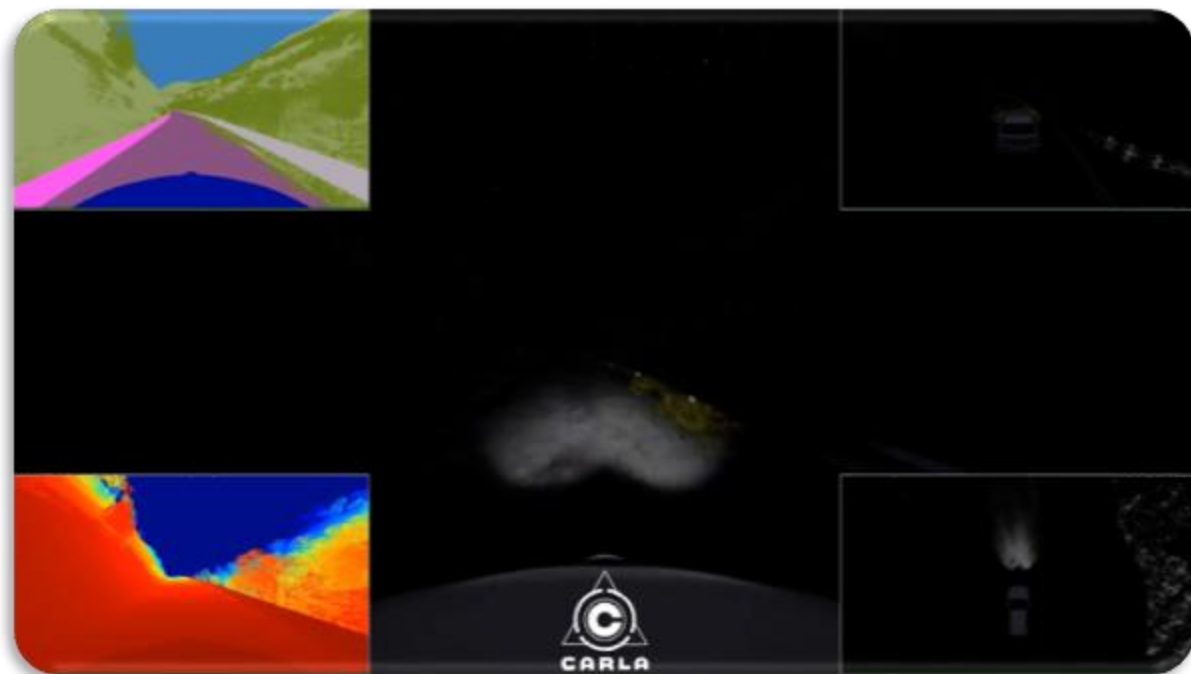


*How do we (re-)
think our reality?*

Digital twins for AI model training



CARLA







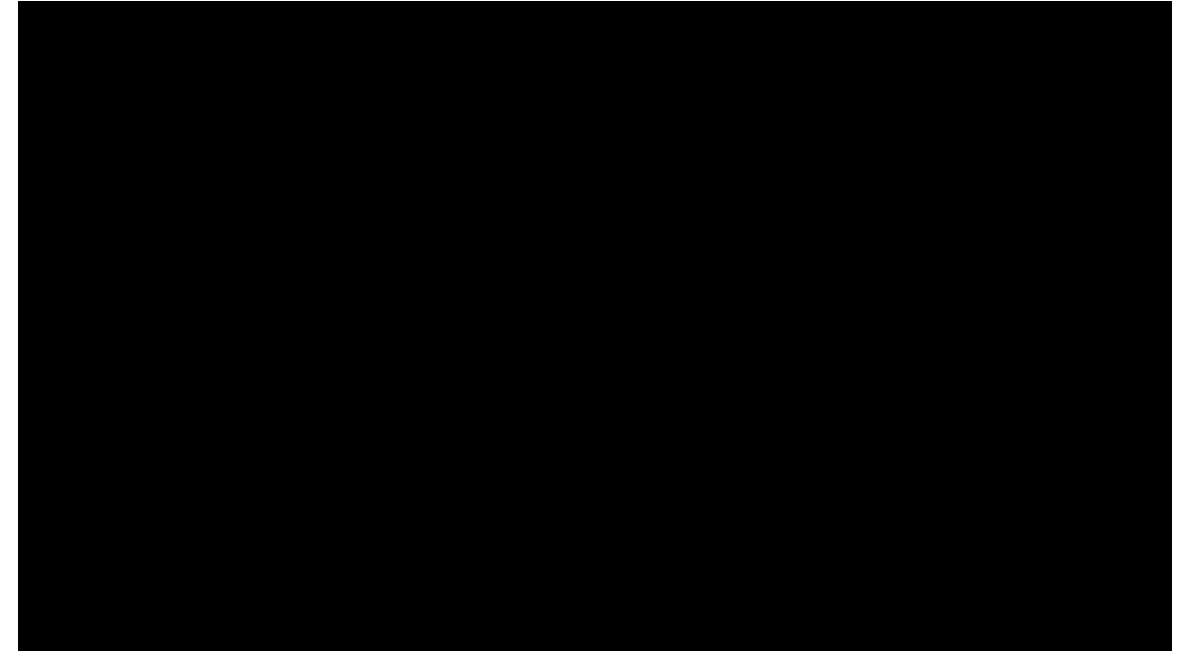
Future Goals

Improving tools related to digital twins.

For that, we need new

Sponsors and/or
Funded Projects from the Industry.

Sponsors along the years:



*Which is the new
interactive
experience?*

Real-time Multimodal UX

BEYOND COLLAPSE

WITH THE SUPPORT OF

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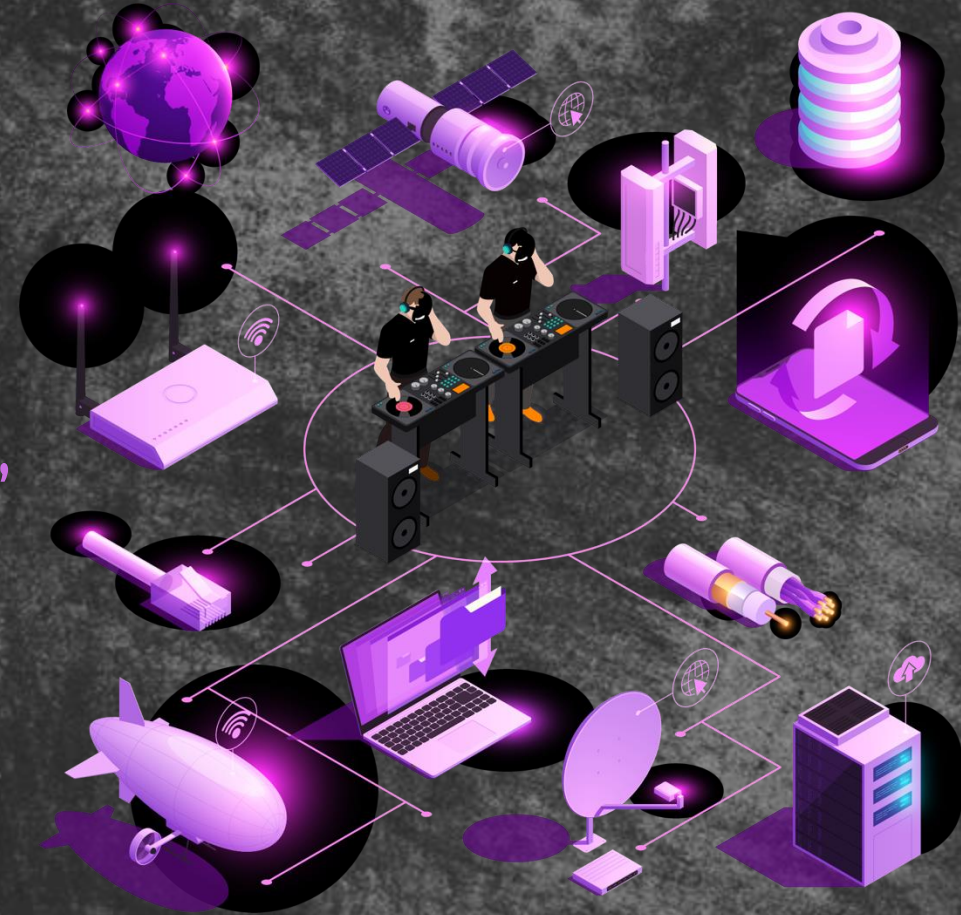




New technologies In live music

Testing and promotion of new technological developments view.

- Generative AI for music and video, drones on stage,
- VR experiences,
- UI interaction experiences,
- future musical instruments,
- NFTs technologies, etc.



technology readiness level

9

Actual System mission proven through successful mission operations

8

Actual System completed and mission qualified through test and

7

System prototype demonstrated in an operational environment

6

System/subsystem model or prototype demonstrated in a relevant environment

5

Component and/or test system validation in relevant environment

4

Component and/or test system validation in laboratory environment

3

Analytical and experimental critical function and/or characteristic proof of a concept

2

Technology concept and/or application formulated

1

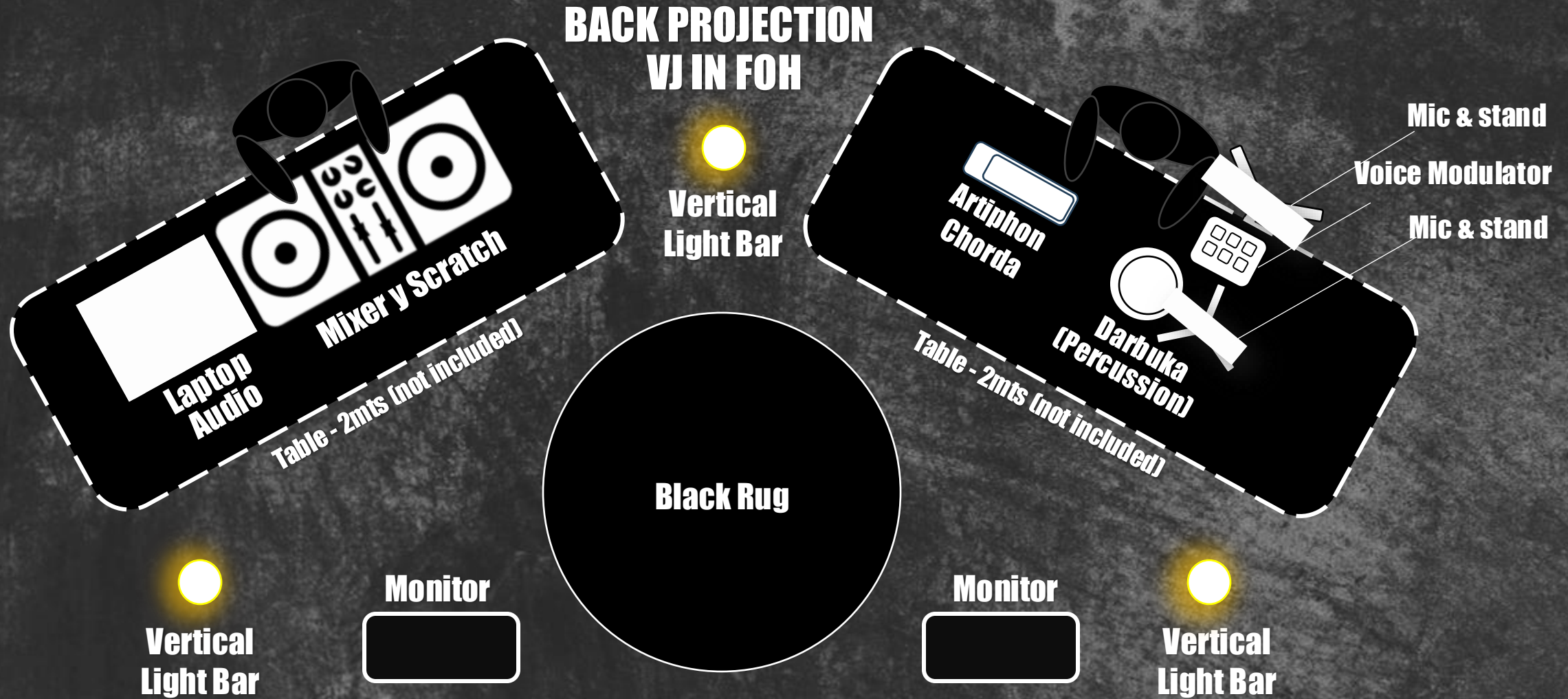
Basic principles observed and reported

Live show





stageplot





Future steps

- NEW TECHNOLOGIES
EXPERIMENTATION
AND IMPLEMENTATION

- INITIAL LIVE SHOWS

- INITIAL LIVE WORKSHOPS

- IMPLEMENTATION OF
UAB TECHNOLOGIES
AND RESEARCH CENTERS

- BIG SCALE LOCAL
LIVE SHOWS

- BIG SCALE WORKSHOPS

- INTERNATIONAL
PROMOTION OF LOCAL
TECHNOLOGIES

- INTERNATIONAL
LIVE SHOWS

- INTERNATIONAL
WORKSHOPS

Now

1 year

2 years



Citizen-centric Innovation and regulation?

Living labs, testbeds and
regulatory sandboxes





감사합니다

Prof. Fernando Vilariño
fernando@uab.cvc.uab.es

