



# NTNU

Innovation and Creativity

## Sensor based interactive digital storytelling

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GAMI/NxtMedia Board member, NEM Executive Committee observer

Department of Electronics and Telecommunications  
Norwegian University of Science and Technology



WAN-IFRA <http://mid.wan-ifra.org/>

**Global Alliance for Media Innovation**

# Backdrop

## Major change in research approach

- How can news media benefit from the 2-4 year time span of our research
- How can our research and innovation benefit from a shorter time frame of 6-12 months closer to immediate news media needs

## Major vehicles for the change

- GAMI
  - Global initiative for connecting academia and the industry
- NxtMedia
  - Norwegian Cluster
- NEM
  - Proposal for an Interactive and Immersive Content PPP (I2C)
- Horizon 2020
  - Partner – SmartSet (IA:ICT-19) and VisualMedia (IA:ICT-19)

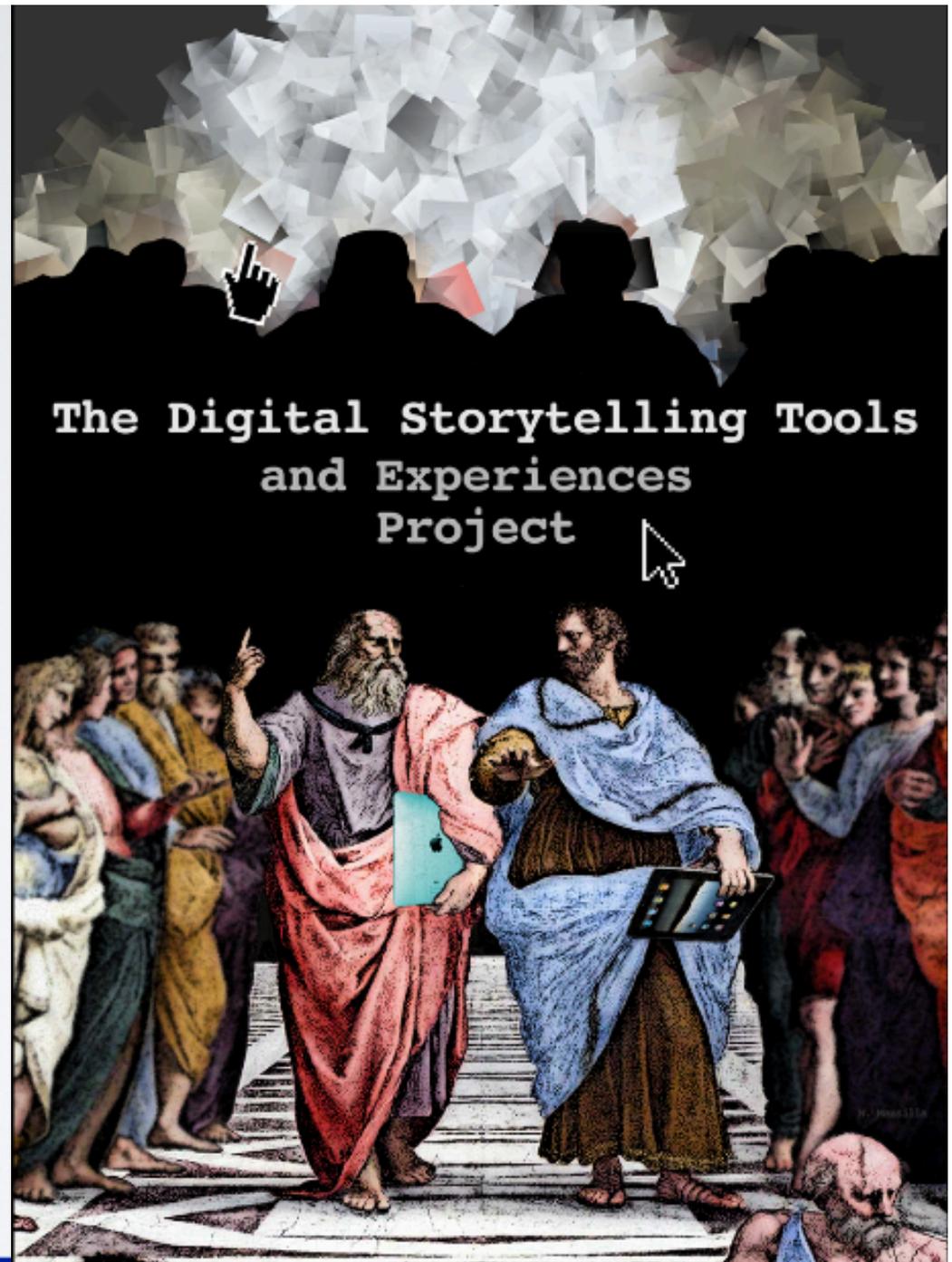
# RIA directions

- NTNU focus
  - IMTE – Immersive Media Technology Experiences
    - Sense-IT
- GAMI/NEM directions
  - Immersive content and new forms of narratives
    - Sports
    - I2C
  - Data exploration to support the modernization of journalism
  - Mobility wearability Internet of Things Smart Cities
- Relates to H2020 WP2016/2017
  - ICT 14,15, 16, 17, 18
    - Big data for news media
  - ICT-19, 20 and 21
    - News and publishing sector
    - Immersive narratives
  - ICT-36
    - NxtMedia clusters

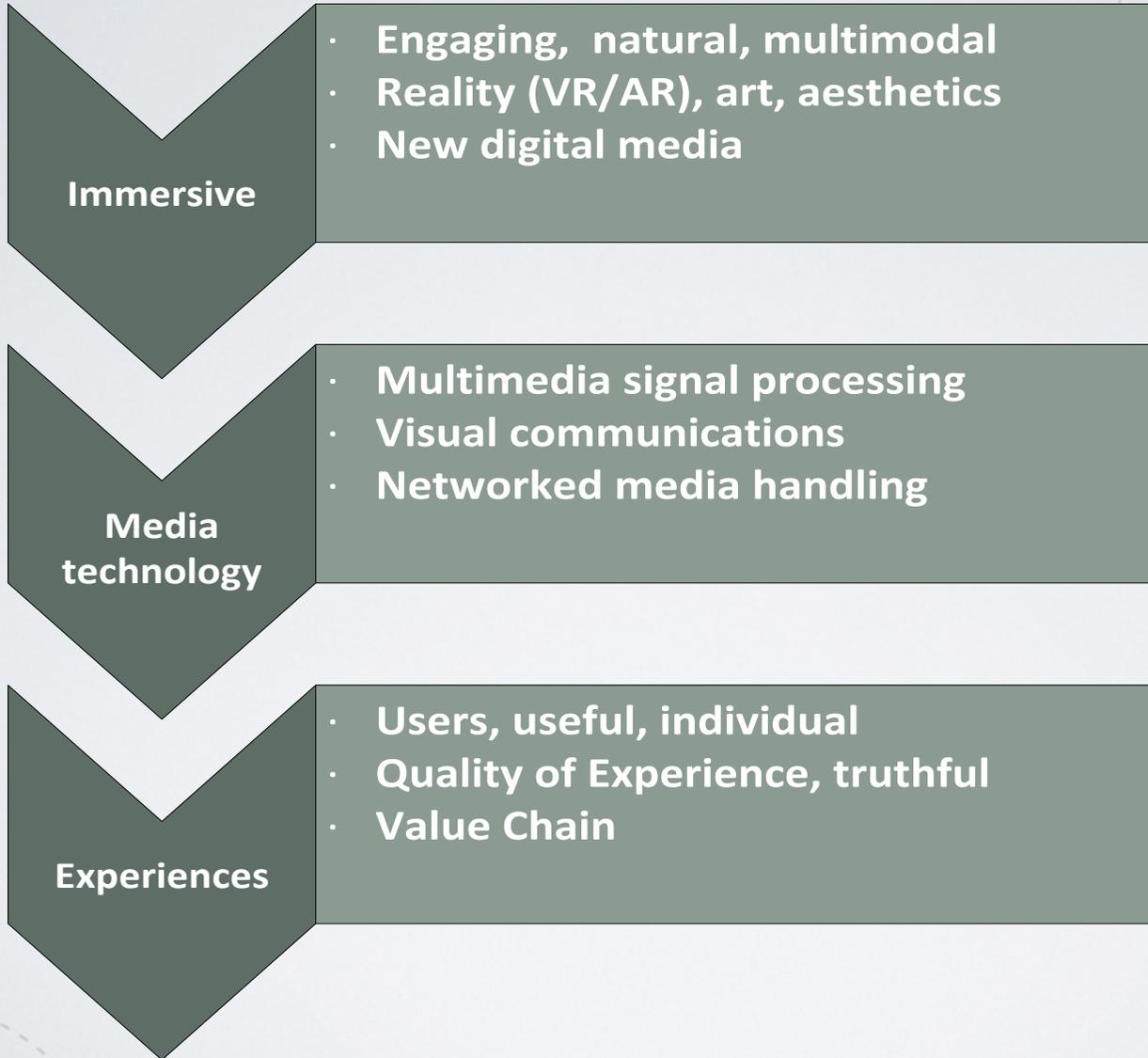


Combining old  
and the new  
storytelling tools  
creating

# Immersive Media Technology Experiences (IMTE)



# IMTE



# New modalities / tools / screens



Professor Andrew Perkis ved NTNU tar i bruk ny 3D-teknologi for å utvikle en ny måte å lese nyheter på.  
Foto: Idun Haugan

source: gemini.no



<http://oculus.quitebeyond.de/hunger-los-angeles-immersive-journalism/>

<http://ispr.info/2014/08/25/project-syria-uses-vr-to-bring-trauma-of-syrian-war-to-life/>



**Immersive Journalism**  
Educating Policy-Makers and the Public through  
Immersive Simulations

[http://summit.immersiveeducation.org/sponsors\\_exhibitors.html](http://summit.immersiveeducation.org/sponsors_exhibitors.html)



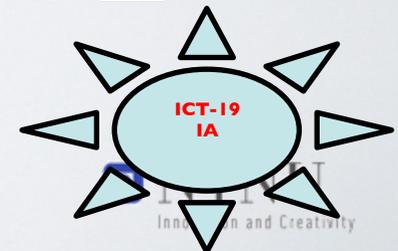
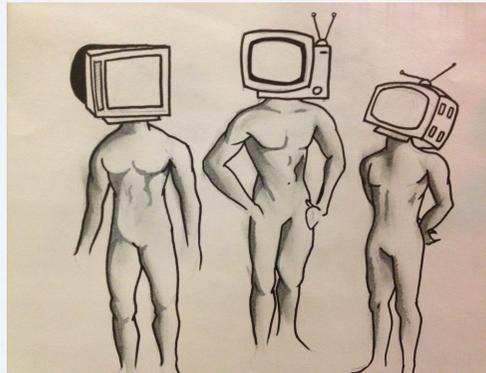
<http://www.immersivejournalism.com/>

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# Challenges for storytellers

Immersive narratives: How do you tell a story surrounding the audience making them participants

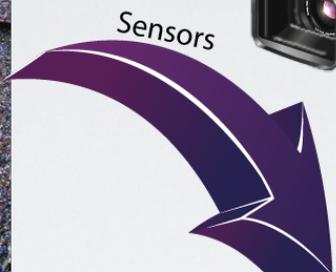
- Content base
  - Sensor data
  - Archived Text, Audio, Video
  - Capture, 360 cameras
- Visualisation
  - Screens
  - Spaces
- GUI/NUI
  - Interaction



# What does it take?

- Idea
  - Creativity, narrative
- Design
  - Electronics, Computer graphics, Models (Blender, ....)
- Animation
  - Rules (Unity)
- User
  - Visualisation (CAVE, Head Mounted Display, Display, ...)
  - Interaction (GUI, NUI)
  - Tasks, skills

# Creates a Sense of Being There



Sensing & Capture



*The space in between*



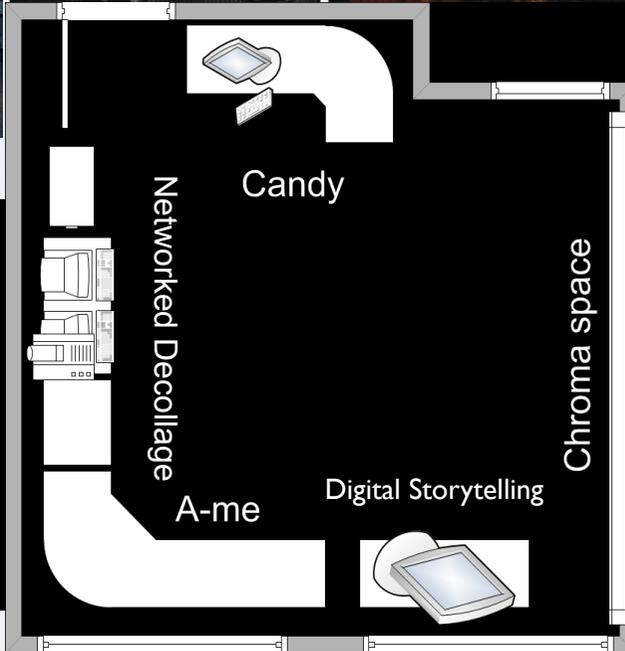
Digital Story



Device & Display



# Sense-IT – NTNU Immersion lab



# Immersive Media Technology Experiences

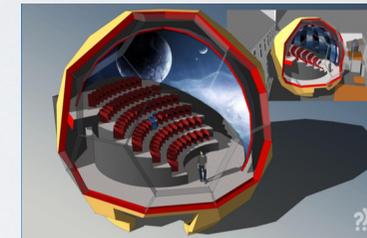


- Media Technology Meets Entertainment
- Media Technology Meets Oil and Gas
- Media Technology Meets Medical
- Media Technology Meets Art
- **Media Technology Meets News?**



# Show cases

Midgard Media Lab



## PICTURING THE BRAIN

Perspectives on Neuroimaging  
2010-2014

The digital storytelling tools and experiences project

PerFormativity  
- Art, Communication and Knowledge Formation





TRONDHEIM KOMMUNE

Adresseavisen

NTNU  
Kunnskap for en bedre verden



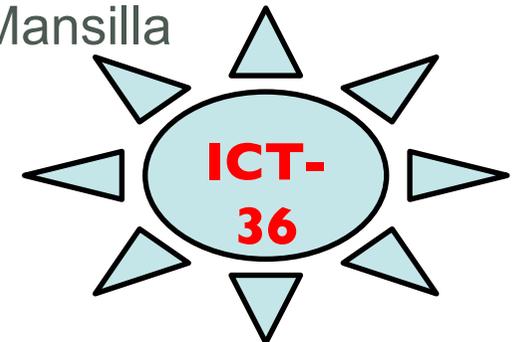
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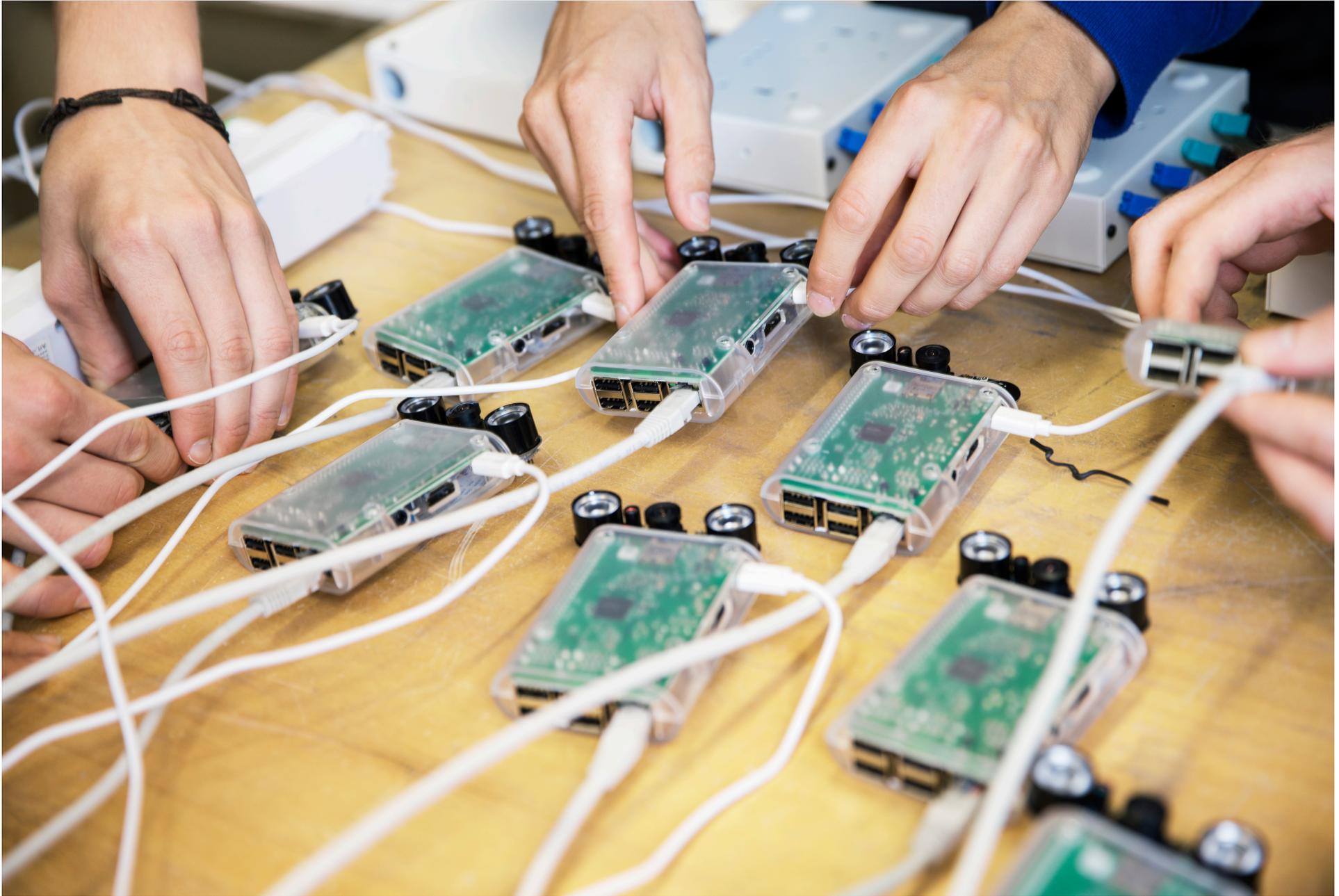
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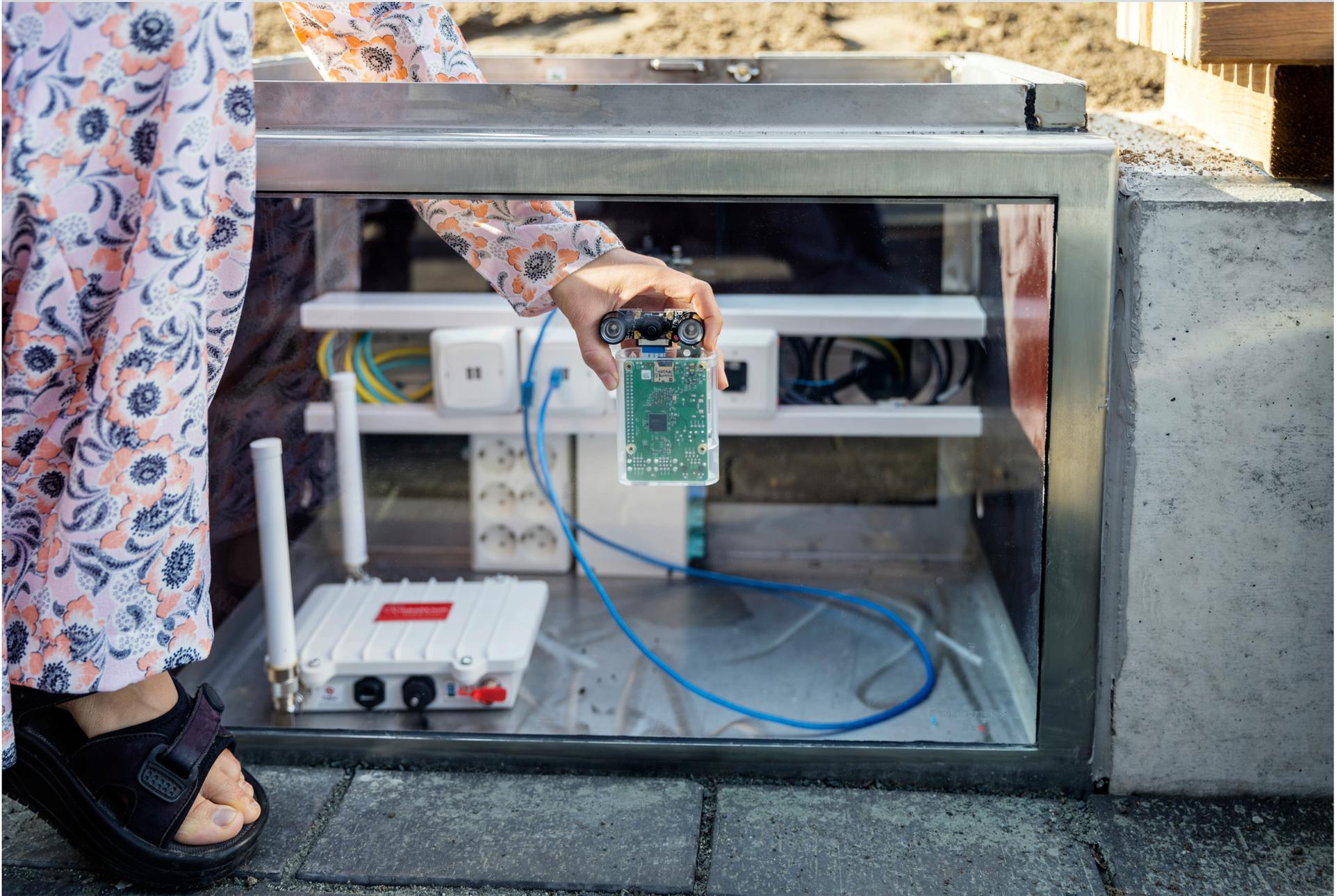
Parken

Immersive Media Technology Experiences

Prof. Andrew Perkis, Dr. Techn., MTM, Dr. Wendy Ann Mansilla  
Jordi Puig, Alfredo Perez and Arnfinn Killingtveit  
Department of Electronics and Telecommunications  
Norwegian University of Science and Technology













# Case: VisualMedia

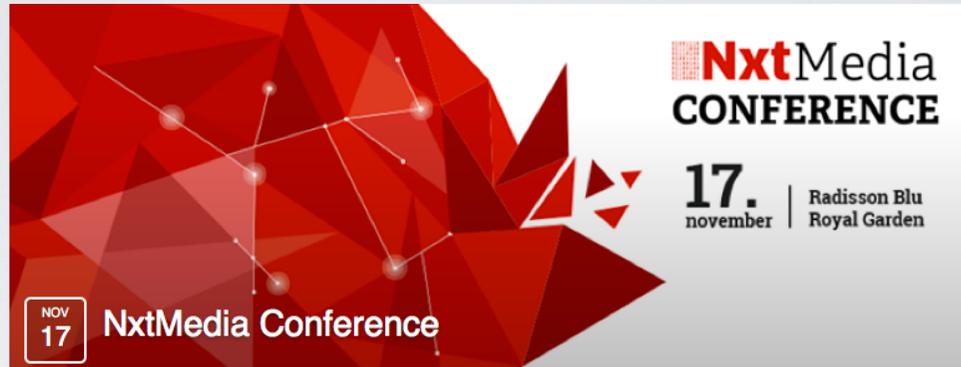


- Duration 24 Months (01.01.16)
- Funding: 3.618.417 EURO (34 MNOK)

**Immersive and Interactive Real Time 3D Social Media Graphics Environments for the Broadcast Industry.**



# Events



## SPEAKERS

◀

- Deniz Ergürel**  
R&D Director, Zaman Media Group  
Turkey
- Mel Slater**  
ICREA Research Professor,  
University of Barcelona  
Spain
- Niko Chauls**  
Director Applied Technology,  
Gannett  
USA
- Louis Jebb**  
Founder & Chief Executive,  
Immersivly Ltd  
UK

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# Key take away

- Good show cases from integrating academia and news and publishing
  - Creates engagement in Research and Innovation
  - Facilitates knowledge transfer
  - Encourages participation in H2020
- The H2020 Work Program 2016/2017
  - Has opportunities for the News and Publishing sector
  - Can show the importance of the News and Publishing sector
  - Requires raised awareness of the News and Publishing sector to be successful