



**IM-TWIN: from Intrinsic Motivations
to Transitional Wearable INTelligent
companions for autism spectrum disorder**
a European funded project

***Professional video on IM-TWIN as a
therapeutic tool***
Deliverable 6.5



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Consortium: Consiglio Nazionale delle Ricerche (ITA), Universiteit Utrecht (NLD), Centre de Recherches Interdisciplinaires (FRA), Università degli Studi di Roma La Sapienza (ITA), Plux-Wireless Biosignals S.A. (PRT).

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Acronyms of partners

CNR-ISTC	Consiglio Nazionale delle Ricerche, Istituto di Scienze e Tecnologie della Cognizione (Italy)
UU	Universiteit Utrecht (The Netherlands)
CRI	Centre de Recherches Interdisciplinaires (France)
LA SAPIENZA	Università degli Studi di Roma La Sapienza (Italy)
PLUX	Plux - Wireless Biosignals S.A. (Portugal)

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1. Overview of the deliverable

This document presents an overview of the several videos produced during the 3-year project. Each video provides information about various IM-TWIN components, and their potential use as tools to support the early intervention with children with ASD, or comparable neurodevelopmental disorders.

2. Video list

All videos are available at the dedicated project webpage, at the link <https://im-twin.eu/video/>. The video material was organised according to the content. Currently, 12 videos were produced, and are here described in order of appearance:

Section 1: Presentation of IM-TWIN project

This section provides 2 videos:

- Title: “*Presentation of the project (year 1)*”:
The first video was edited at the very beginning of the project, and presents an overview of the IM-TWIN project and its goals. The video is available at the link https://im-twin.eu/video/#presentation_of_the_project. The video itself was also part of the deliverable [D6.2 “Professional video on project, stage 1”](#).
- Title: “Project final technological outcome (year 3)”:
This video was edited at the end of the project, and presents an overview of the IM-TWIN technological outcomes. The video is available at the link https://im-twin.eu/video/#project_final_technological_outcomes. The video itself was also part of the deliverable [D6.3 “Professional video on project, stage 2”](#).

Section 2: PlusMe: a Transitional Wearable Companion (TWC)

This section provides 2 videos:

- Title: “*PlusMe: a Transitional Wearable Companion*”:
This video gives an overview of the technical features of the *Panda PlusMe*, the first *Transitional Wearable Companion* prototype to be realised. The video is available at the link <https://im-twin.eu/video/#Plusme>
- Title: “*Experimental sessions using Panda PlusMe*”:
This video gives an overview of the activities where *Panda PlusMe* is used as a support

tool to stimulate the social competences of ASD children, during sensory-motor play activities with the therapist. The video is available at the link https://im-twin.eu/video/#experimental_sessions_using_Panda_PlusMe

Section 3: Octopus X-8: a TWC to train turn-taking competence

This section provides 3 videos:

- Title: “*Octopus X-8: functional features*”:
This video gives an overview of the technical features of the *Octopus X-8*, the second *Transitional Wearable Companion* prototype to be realised. The video is available at the link https://im-twin.eu/video/#x8_functional_features
- Title: “*Octopus X-8: first pilot*”:
This video presents selected clips of the first pilot test, run with 3 NDD children. The video is available at the link https://im-twin.eu/video/#X-8_first_pilot
- Title: “*Octopus X-8: data collection capabilities*”:
This video presents an overview of the data collection capabilities of the device. The video is available at the link https://im-twin.eu/video/#data_collection_capabilities

Section 4: Eye Contact Detector tool

This section provides 3 videos:

- Title: “*Eye contact Detector*”:
This video shows a feasibility test, where two researchers evaluate the performance of the *Eye Contact Detector*, a tool implemented to detect, through a computer vision algorithm, the eye contact between child and therapist. The video is available at the link https://im-twin.eu/video/#eye_contact_detector
- Title: “*Eye contact Detector: pilot test*”:
This video shows a pilot test, where the *Eye Contact Detector* tool was used with a 38-month-old child, undergoing neuropsychological assessment, during play activity with a therapist and *Panda PlusMe*. The video is available at the link https://im-twin.eu/video/#eye_contact_detector_pilot_test
- Title: “*Linux App: ‘Eye Contact Detector’*”
This video shows a test with the *Eye Contact Detector* GUI, a graphic tool which allows the researchers to use the *Eye Contact Detector* software through a user-friendly graphic interface. The video is available at the link https://im-twin.eu/video/#linux_app_eye_contact_detector

Section 5: Sensorised T-shirt

This section provides 2 videos:

- Title: “*Sensorised T-Shirt*”.
This video shows the first test where the *Sensorised T-Shirt* was used with a Typically Developed 30-month-old child, while playing with soap bubbles. The video is available at the link https://im-twin.eu/video/#sensorised_tshirt.
- Title: “*Sensorised T-Shirt, test with an ASD child*”.
This video shows the first test where the *Sensorised T-Shirt* was used with a ASD 36-month-old child, while playing with *Panda PlusMe*. The video is available at the link https://im-twin.eu/video/#sensorised_T_Shirt_test_with_ASD_child.

3. Future Developments

The video page of the project website is constantly updated with new videos, and will be used by the partners as support material for next research, dissemination and exploitation activities.