

# Development of Robot-enhanced Therapy for Children with Autism Spectrum Disorders



# Project No. 611391

#### **DREAM**

# Development of Robot-enhanced Therapy for Children with Autism Spectrum Disorders

Agreement Type: Collaborative Project

Agreement Number: 611391

# D8.1 Dissemination means: project website, social media and leaflets

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Organisation name of lead contractor for this deliverable: Vrije Universiteit Brussel

Responsible Person: Bram Vanderborght

Revision: 3.0

| Project co-funded by the European Commission within the Seventh Framework |   |    |  |
|---|---|----|--|
| Programme   |   |    |  |
| Dissemination Level   |   |    |  |
| PU  | Public  | PU |  |
| PP  | Restricted to other programme participants (including the Commission Service) |    |  |
| RE  | Restricted to a group specified by the consortium (including the Commission   |    |  |
|   | Service)  |    |  |
| CO  | Confidential, only for members of the consortium (including the Commission    |    |  |
|   | Service)  |    |  |



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## **Executive Summary**

This document forms deliverable D 8.1 – Dissemination means: project website, social media, leaflets – within Work Package 8 of the DREAM project plan. The DREAM project foresees both "online" and "offline" dissemination activities. Online activities mainly involve the website and the social media platforms play the main role while offline activities include the production of presentation templates, leaflets and roll up banners are to be used at conferences and social events. A professional design agency - AdGrafics Design Studio (<a href="http://www.adgrafics.eu/">http://www.adgrafics.eu/</a>) - has been tasked with developing the required materials as well as a consistent, comprehensive identity for the project.

This document describes the materials produces by the agency, as well as the mechanisms and infrastructure deployed to facilitate dissemination of information about the DREAM project.



# **Principal Contributors**

The main authors of this deliverable are as follows (in alphabetical order):

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# Revision History

#### Version 1.0 (PG 29-07-2014)

First draft.

#### Version 2.0 (PG 11-08-2014)

Includes suggestions from partners and updates from the design agency.

#### Version 2.1 (ST 11-08-2014)

Minor corrections.

#### Version 3.0 (PG 08-09-2014)

Includes presentation templates, pictures from the photo shoot, banner and leaflet.



#### Introduction

This document describes the dissemination means to be used within the DREAM project. Note that this document was due to the end of the first month but considering that the kick-off meeting of the project took place at the end of the second month, the whole procedure was delayed.

The project employs various means for disseminating the project results to different audience categories, including the general public, academia and the scientific community, and parents with children with autism. In particular, the DREAM project will provide and maintain a comprehensive set of tools for dissemination of the results obtained, such as a project website, the use of social networks and leaflets and other offline communication resources to be used in events and media appearances. A professional design agency - AdGrafics Design Studio (http://www.adgrafics.eu/) - has been tasked with developing the required materials as well as a consistent, comprehensive identity for the project. This deliverable documents these dissemination tools.

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### Website

The consortium recognizes the importance of continuously communicating developments and results from the DREAM project to the outside world. These communication activities will be carried out via the project website as well as broadcasts in social networks. An initial version of the project website has been operational since the project's start date, detailing the project's goals and challenges, the partners, and the robotic platforms to be used.

During the kick-off meeting, the project's domain name (<a href="www.dream2020.eu">www.dream2020.eu</a>) - provisionally secured beforehand - was agreed upon. The final website will be hosted using the hosting services provided by the design agency hired to produce the website.

The website is to be updated regularly with incoming news and events as well as downloadable versions of the deliverables and reprints of scientific papers produced. Members of the EB will be able to make modifications and upload new content as needed; however, VUB will be responsible for providing content and maintenance of the site.

#### **Initial Website**

An initial version of the website went live, both in time for the project start and for the International day of Autism (April 2nd). To provide a useful and relevant website within that timeframe, it was decided that the initial version would be static and cover the following aspects:

- What are the challenges addressed by the project?
- Who is participating in the project?
- How does the project decompose into work packages?
- What robots will be used?

This website provided a good starting point for early visitors interested in the development of the project. This draft website (Figure 1) was provisionally hosted on VUB's servers (mech.vub.ac.be/dream/index.html).



Home Workpackages Partners Robots

#### DREAM

Development of Robot-Enhanced therapy for children with AutisM spectrum disorders



DREAM is a new EC-funded project that will deliver the next generation robot-enhanced therapy (RET), developing clinical interactive capacities for social robots that can operate autonomously for limited periods under the supervision of s psychotherapist. DREAM will also provide policy guidelines to govern ethically-compliant deployment of supervised autonomy RET. The core of the DREAM RET robot is its cognitive model which interprets sensory data (body movement and emotion appearance cues), uses these percepts to assess the child's behaviour by learning to map them to therapist-specific behavioural classes, and then learns to map these child behaviours to appropriate therapist-specific robot actions.

#### Challenges addressed by DREAM

Child-robot interaction strategies: We focus on evidence-based therapies suitable for improving social interaction skills. The robot will assist the therapist in teaching the child social

Cognitive social behaviour for supervised autonomy: We develop a new platform-independent congnitive controller based on the needs of human social interaction, exploiting the propensity of people to "fill in the gaps" in social interaction by generating behaviour that facilitates interpretation by ASD children.

Child-specific behaviour assessment: We create a model that can track and quantify changes in child behaviour based on off-body sensory data as well as provide quantitative interindividual comparisons to assist therapist in their tasks

Multi-sensory data fusion and interpretation for diagnosic support: Multi-sensory data will be used to provide quantitative support for the diagnosis and care/treatment of ASD, replacing current labour intensive techniques involving paper and pencil, or manual video analysis.

Ethics of human-robot interaction: We ensure that the technical design of the robot complies with existing ethical, social, and legal norms. We also address new ethical and legal issues raised by the particular kind of interaction that emerges in the interaction between children and autonomous robots in therapeutic contexts.











Figure 1: Draft version of the initial DREAM project website. Homepage's view.

#### **Full Website**

A full, professionally designed, website has been commissioned based on the needs and ambitions of the project. The consortium agreed on hiring AdGrafics Design Studio (http://www.adgrafics.eu/) to realize this and other dissemination-related tasks.

The website uses a Content Management System (CMS), allowing each member of the EB to publish, edit and modify content easily. We opted for WordPress as it is the most used and supported platform within the community.

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The website explicitly caters for three different types of visitors (as also shown in the sitemap of Figure 2):

- Researchers and clinicians: this part of the website contains scientific information, detailing research carried out within the project and including downloadable versions of scientific documents such as publications and deliverables. The consortium agreed to consider including an open science section where some data from the experiments will be shared per request, helping other researchers to replicate the experiments using different robotic platforms and contexts.
- General public: this part of the website summarises all information about the project
  in language that is accessible to visitors from outside of academia, thus increasing the
  public awareness of the benefits of socially-assistive robots in health- and childcare.
- **Parents**: this section provides specific information about the DREAM project to those parents who have children with ASD, explaining the procedure followed in RAT, and particularly in supervised-autonomy RET. The aim of this is simply to provide information on how to participate in our studies, how the experiments are developed, and where to find additional information.

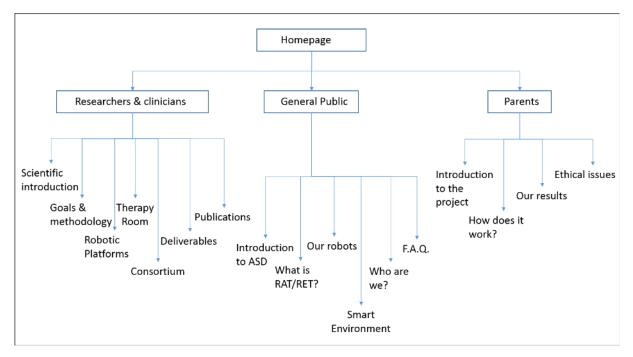


Figure 2: Sitemap of the DREAM project website

The entry point of the website (see Figure 3) will invite the visitor to choose among the three different profiles which are suggested through a carrousel of images circling right-to-left. Along with each of the images, on the right side of the carrousel, a short introduction to each of the profiles is displayed. A drop-down menu for quick access to subsections of any profile is placed just above the carrousel.

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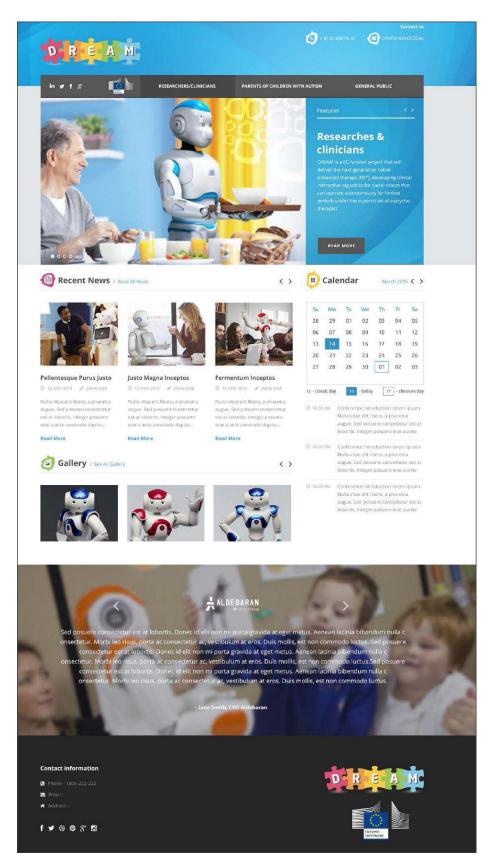


Figure 3: Preliminary view of the website homepage.



Below the carrousel, some news boxes can be found, as well as a calendar with information about upcoming events, and finally a gallery of images. At the bottom of the homepage, another carrousel of images lists the partners involved in this project. Finally, contact information for e-mail and social networks are provided in the website headers and footers.

A professional photographer was hired to complement each section of the website with related pictures, see Figure 4 and in Appendix 1 for some examples.





Figure 4: Pictures related to the Ethics and the Researchers and Clinicians sections.

Given the present-day variety of devices on which the website can be accessed, it is crucial that the website provides an optimal viewing experience across the entire range of such devices including mobile phones, tablets and desktop computers. The commissioned design will address this need.



Figure 5: Preliminary website displayed in different devices.

Apart from the design itself, the work of the design agency also includes search engine optimization (SEO), which improves indexing by search engines as well as providing security



features, including automated back-ups and measures protecting against hacks, attacks and other common threats.

#### Social Media

Along with the website, social networks play the key role in the dissemination of the results of the DREAM project. The consortium agreed on using:

- Facebook, which will be used to approach the general public, promoting events and showing pictures and videos of the robots involved in the experiments.
- Twitter, to spread the word within the different communities and to follow meetings, conferences, workshops and summer schools.
- YouTube, to disseminate videos (both scientific and promotional) created within the project.



Figure 6: Preliminary DREAM's Twitter profile

The responsibility for maintaining and updating social network presences lies with VUB.



## Identity and Branding

The original logo has been redesigned to achieve a more professional look, a presentation template has been commissioned and will be used by all members of the consortium while a brochure and leaflets will be produced to promote the DREAM project through conferences and workshops.

The design agency provided us with diverse logo proposals (see Appendix 2). We opted for two different logos: one (here referred to as "main logo") to be used in contexts such as the website and one with additional graphical detail to be used in banners and flyers.

The main logo, see Figure 7, is a redesign of the initial design but with a more professional appearance. The core motivation underlying the original design is maintained in this logo:

The multi-coloured jigsaw puzzle used in the DREAM logo is an international symbol of autism. It reflects the mystery and complexity of the disorder and the mechanical nature of an autistic person's thought process. The bright colours represent hope: the conviction that advances in therapy – aided by science and technology – can help autistic people realize their full potential as members of society.



Figure 7: Main logo

Figure 8 complements this idea with the presence of a child and a robot emphasizing the fact that we are using social robots within the interventions, and that human-robot interaction plays a key role in the treatment of these patients.



Figure 8: Complex logo



The project needs to raise awareness among defined audiences and, realizing the fact that the internet is not always the most appropriate medium to achieve attention or making information available, the following promotional materials have been produced:

- A leaflet which will be used during conferences, workshops, summer schools, social events, etc. to let the attendees know about the DREAM project and the dissemination activities to be organized, see Figures 9 and 10.
- A roll up standing banner for each partner that will be used during social events, see Figure 11.
- A presentation template to be used at conferences and oral communications, see Figures 12 and 13.



Figure 9: Design of recto side of leaflet.





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Figure 10: Design of verso side of leaflet.

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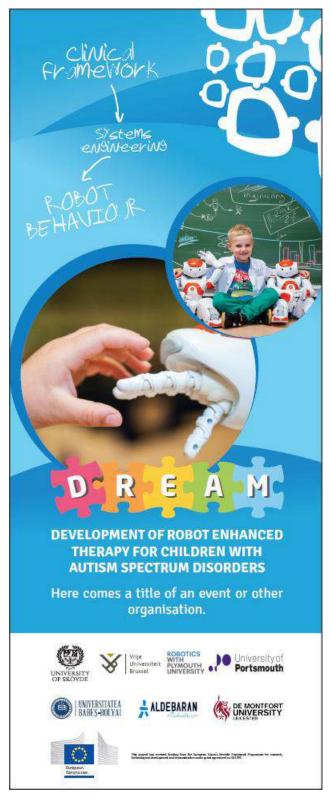


Figure 10: Banner.





Figure 11: Appearance of the front-page in the PPT template.

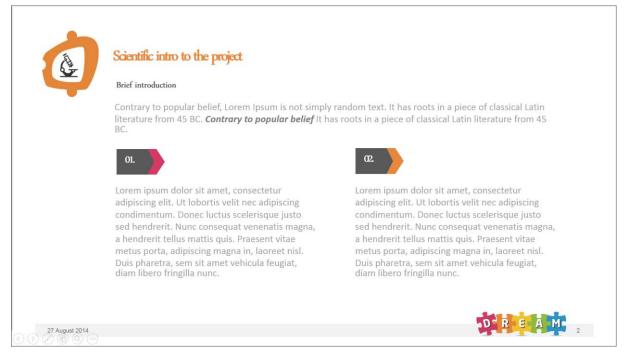


Figure 12: Appearance of a random slide from the PPT template.

Complementing the logos and the presentation template, the design agency has provided the consortium with a corporate logo guidelines document describing the colour palette used for



the background and the puzzle pieces, and a set of combinable icons to illustrate different topics within documents and presentations, see Appendix 3.

Finally, several e-mail addresses using the website domain have been made available. These include: <a href="mailto:info@dream2020.eu">info@dream2020.eu</a>, <a href="mailto:summerschool@dream2020.eu">summerschool@dream2020.eu</a>, <a href="mailto:workshop@dream2020.eu">workshop@dream2020.eu</a>, <a href="mailto:press@dream2020.eu">press@dream2020.eu</a>, <a href="mailto:socialmedia@dream2020.eu">socialmedia@dream2020.eu</a> and <a href="mailto:coordinator@dream2020.eu</a>. An additional 4 e-mail addresses remain available in case a future need develops.



## Conclusion

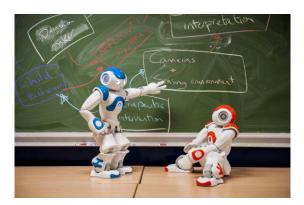
This document has described the dissemination means that are to be used with the DREAM project, and has divided it into online and offline communication.

On the online side a website has been developed and several social networks will be used to interact with the people interested in the project publishing the project's results and news.

On the other hand, the offline communication consist on branding image promoted by a redesigned logo, standing banners, presentation templates and leaflets.



# Appendix 1. Photo shoot selected pictures











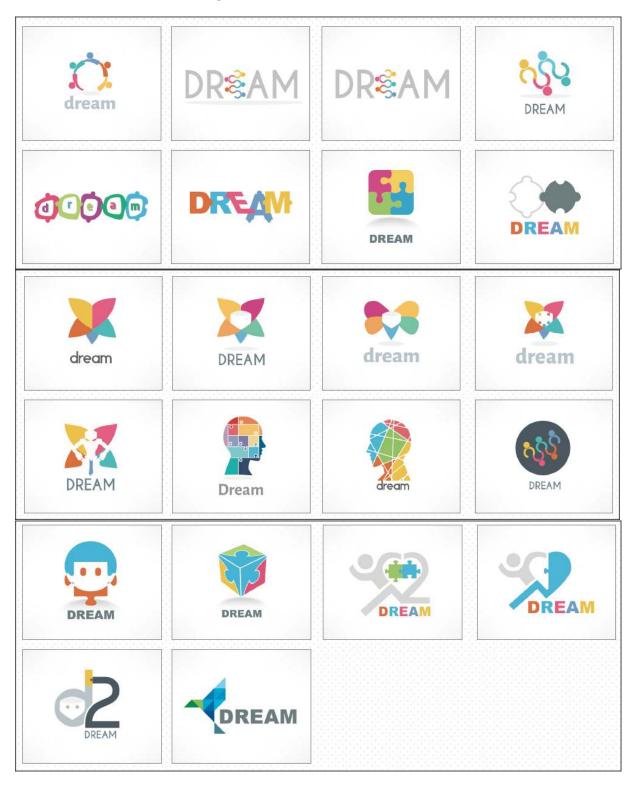




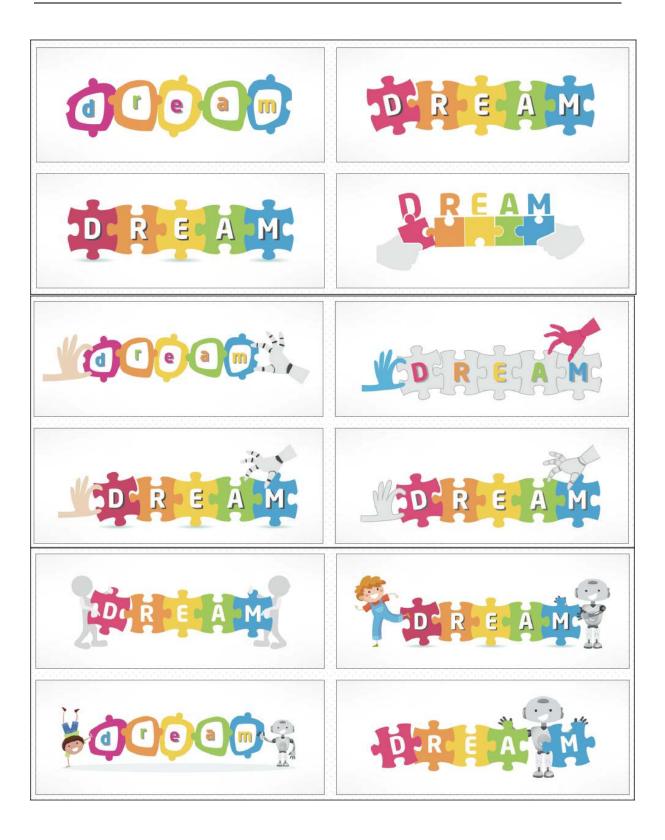




# Appendix 2. Logo proposals









# Appendix 3. Corporate Guidelines

