

Holistic Human Factors Design of Adaptive Cooperative Human-Machine Systems



D 10.5 – Final Exploitation and Dissemination Plan

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Introduction

D10.5 documents the activities that are related to the outreach of the HoliDes project to the outside world, specifically to the exploitation activities and to the dissemination activities.

In the first part of the deliverable (D10.5 a), the exploitation activities are provided. This part includes an overview of the overall exploitation strategy and of the market innovation in the four application domains, followed by the current exploitation & business plans of the partners.

The second part of the deliverable (D10.5 b) presents as well an overview of the HoliDes dissemination plan and the dissemination activities performed during the third project year, showing the achieved results.

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Part a: Exploitation plan, final version

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1 List of industrial participants

Company	Name
ATOS	Ignacio Gonzàlez
Ibeo	Martin Krähling
HFC	Harald Kolrep
Integrasys	Jose Cordero
Civitec	Mathias Ferraton
Lufthansa	Victor Fuchs
Airbus Defence and Space	Frank Jonat
ТАКАТА	Gert Weller
Centro Ricerche Fiat (CRF)	Fabio Tango
Iren	Caterina Calefato
RE:Lab	Elisa Landini
Truestream	Frank Rister
Intempora	Nicolas Du Lac
Honeywell	Maros Raucina
TWT	Marieke Thurlings
Philips	Ernst Hermens

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2 Market Innovation and impact

2.1 Health

The HoliDes AdCoS approach allows building systems with higher automation levels taking human factors and safety regulations into account. Because of the increasing complexity of the system settings and functionality the operator needs to be guided to make e.g. the right selection of parameters. Automation in the HoliDes health domain mainly deals with the right workflow support, reducing the need to redo calculations and estimates in parameter setting. This support reduces the stress of the operator because of operator overload. For the interventional systems, automation will lead to automatic adaptation to the situation at hand, which may change during the interventional procedure. In unclear situations, or intervention errors, the system will adapt to inform the medical specialist to solve the problem fast and to maintain safety, as time limits are important for recovery. These new features of the health systems will increase the confidence of the users. Validation shows user needs are satisfied and all human interaction related risk mitigations are in place. Tooling to support the validation in various phases development, from design concepts up to the final product, can be very valuable to improve the coverage and efficiency, reducing lead time and required effort.

2.2 Aeronautics

The adaptive cooperative aircraft cockpit complemented with adaptive pilot training developed in WP7 using the HF-RTP and methodology is expected to contribute to better comprehension to the automated systems by the users (pilots). Adaptive behaviour with shared user interfaces developed with the HF-RTP technology increases the usability and thus safety of the system because the pilots will find the functions more easily and can react faster to any events. Open and intuitive communication of the automation state to the user will increase confidence of the users in the systems. Human agents will understand and tolerate the ultimate ratio design of shared authority provided the system can duly consider the human agent(s) to be overloaded, overstressed or even incapacitated. This is a major precondition to build higher levels of automation using HoliDes techniques and tools. The adaptive

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training application (built based on training models from WP2, T2.6) will further enhance safety, because it allows to focus on training items that are required by the type of conversion, by the ever-changing requirements of new, oncoming automation levels and, above all, by the needs of the trainees and their background. The trainees will be able to train to their needs and will get more objective measurements for training standards and consequently more confidence in their training progress. The improved adaptiveness and thus improved quality of the training have a positive impact on the overall safety of flight.

2.3 Control Rooms

Introducing human views into the design of Control Room Solutions in the early design phases and also throughout the whole development process will lead to better solutions, providing a holistic approach that raises a awareness of the human-machine interaction, enhancing the safety and security of any operation.

The consideration of aspects like mental state, experience and training, cultural background and language will transform operational processes by enhancing confidence and acceptance by the user. The improvement in the human-machine cooperation will enable the user to capture high priority information and to react accordingly much more easily than before.

The usage of the advanced evaluation methods and tools in the Control Room integration, verification and validation process will lead to better system qualification results thereby improving system safety as well. In general improved system safety is a measure to enhance public confidence.

Adaptation in Control Rooms enables higher levels of automation to be selected depending on operators' profiles and operators' situational capacities.

2.4 Automotive

Surface transport safety is ranked among the great societal problems in Europe and worldwide. In particular, it has been estimated that road traffic accidents costs for EU15 are annually 160 billion Euro, making about 1.5 % of the annual GNP. During the past 5 to 8 years, commitment to increased road safety has arisen. The recent expansion of the EU accentuates the need for effective and rapid safety measures. In order to deal with these issues,

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the automotive industry has developed many driving assistance systems – ADAS (Advanced Driver Assistant Systems).

According to Visiongain's report "Automotive Advanced Driver Assistance Systems (ADAS) Market 2014-2024: Precursor to the Autonomous Self-Driving Car", the global automotive ADAS market will reach \$18.2bn in 2014, up from \$16.5bn in 2013. Visiongain assesses that the market for automotive ADAS will continue to grow throughout the period 2014-2024, as ADAS become increasingly strong product differentiators and assist in the development and acceptance of autonomous self-driving.

In parallel to the ADAS development, a new scenario is opening: mobile phones suppliers are increasingly looking for integration with vehicle information systems, i.e. connecting the phone via Bluetooth and mirroring its contents to the dashboard (new systems such as Carplay and MirrorLink).

In accordance with these trends, techniques and tools developed in HoliDes will allow to develop and qualify AdCoS with increased automation levels. More precisely, the AdCoS developed in WP9 using the HF-RTP and methodology from WP1 will help to "optimize" the task and authority allocation between human and machine; according to the internal context that is the cognitive-state (e.g. workload, distraction, fatigue) and behaviour of the human driver) and to the external context (e.g. risk associated to traffic density, weather conditions, etc.). HoliDes WP9 will also intercept the new trend mentioned above, which sees the smartphone increasingly integrated into the car, with the development of an application for smartphone (App) that integrates the most relevant functions included in the on-board dashboard with innovative functions of safety (such as the ADAS installed on the vehicle).

The systems developed in HoliDes will harmonize the traffic flow, avoid wrong or inappropriate behaviours, decrease risky driving situation, thus prevent accidents and enhance safety. Given the fairly conservative estimate that, by 2015, the HoliDes results contribute to a 5-10% reduction of human errors causing accidents, this would save about 2000-5000 lives in Europe each year and reduce accident rate by at least 65000. The adaptiveness of the Automotive AdCoS will be achieved by using techniques and tools from WP3. These will allow to push the adaptiveness of the machine agents in cars example, optimal filtering information and by, for of intuitivelv communicating (and choosing) the appropriate degree of automation. This new form of communication will increase the confidence of the users and of the public.

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3 Partners' individual exploitation plans

Removed for confidentiality issues.

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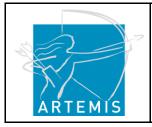


Part b – Dissemination plan, final version

Introduction

Part B of Deliverable 10.5 presents the final dissemination plan of project HoliDes and in particular the activities performed during the third year, i.e., from October 2015 (M25) to September 2016 (M36), aimed at disseminating the results achieved by the project as the objectives of Task 10.1.

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1 HoliDes final dissemination plan

As preannounced in D10.4, the dissemination efforts of the third year have been aimed to satisfy the dissemination success criteria and to reach the dissemination milestones presented in D10.4, Section 3.3.

Particularly, the objectives were the following:

- 1) Reaching a total number of international peer-reviewed publications of 40
- 2) Reaching a number of website visits per year of 2000
- 3) Ensuring that the average time spent on the HoliDes website for the 40% of the users is greater than 1' and 30'
- 4) Receiving web visits from more than 40 countries
- 5) Establishing contacts with relevant standardization bodies
- 6) Realizing the project video
- 7) Producing a final press release
- 8) Organizing the HoliDes final event

The sections of D10.5 are conceived to show how such objectives have been reached thanks to the dissemination activities of the third year.

The first objective has been achieved since, as in the second year, the partners produced more than 20 relevant peer-reviewed scientific publications also during the third year of the project, overcoming that way the envisioned threshold. Details about the kind of the publications are provided in Section 2.

Goals from 2 to 4 involved the contents production and management of the HoliDes website, the main communication channel of the project towards the global audience. Different kind of contents have been uploaded on the HoliDes website during the third year, ranging from newsletters (Section 3), videos (Section 4), posters created by the partners (Section 8.1), as well as outcome descriptions (Section 8.2). These contents have been created thanks to the coordination of SNV and to the contributions of all the project members. Their purpose was to communicate in different modalities the topics covered by the project and to make this information publicly available to interested people. The awareness about the project (with the consequent website visits) was created thanks to (i) individual dissemination activities of

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partners (Section 0), aimed at the exploitation of the HoliDes efforts; (ii) to dedicated events organized for the purpose (Section 5), also for meeting similar European research communities (Section 6); (iii) to the scientific presentations of the HoliDes achievements. The website advertising in these contexts and the new contents produced in the third year contributed to satisfy the objectives from 2 to 4, as shown in Section 9.

With reference to objective 8, contacts with standardization initiatives are reported in Section 7, including the creation of the OSLC Human Factors User Group and the ETSI technical committee Human Factors.

The project teaser has been realized by SNV, satisfying that way objective 6. Different other videos have been produced as well (Section 4).

A final dissemination document about the project, satisfying objective 7, is represented by the HoliDes brochure, including a summary of the main outcomes of the project (Section 5.2.5), to be distributed during the HoliDes final event and to be published on the HoliDes website as well.

Finally, the HoliDes final event has been organized by SNV, OFF, EAD-DE-CAS and EAD-DE-IW with the collaboration of all the project partners, to be hosted by EAD-DE-CAS in the headquarter of Friedrichshafen on September 29th (Section 5.2).

2 Publications

During the third year, HoliDes partners produced more than 20 international peer-reviewed scientific publications and a couple of publications of other type about the project achievements. The complete list of the publications and related authors is reported in Annex I.

The peer reviewed publications are mostly international conference proceedings. The international conferences are listed below:

- 1. 6th International Conference of Applied Human Factors and Ergonomics Conference (AHFE), 2015, Los Angeles, California
- 2. 7th International Conference of Applied Human Factors and Ergonomics Conference (AHFE), 2016, Orlando, Florida
- 3. Human Factors and Ergonomics Society (HFES) Europe Chapter 2015, Groningen, Netherlands

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- 4. 58th Conference of Experimental Psychologists (TeaP), 2016, Heidelberg, Germany
- 5. 8th European Congress on Embedded Real Time Software and Systems (ERTS), 2016, Toulouse, France
- 6. 32nd European Association for Aviation Psychology Conference (EAAP), 2016, Cascais, Portugal
- 7. International Conference on Human-Computer Interaction in Aerospace (HCI-Aero) 2016, Paris, France
- 8. 22nd ITS World Congress, 2015, Bordeaux, France
- 9. IEEE International Multi-Disciplinary Conference on Cognitive Methods in Situation Awareness and Decision Support (CogSIMA), 2016, San Diego, California
- 10. ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS) 2016, Brussels, Belgium
- 11. ACM Working Conference on Advanced Visual Interfaces (AVI) 2016, 2016, Bari, Italy
- 12. Annual Conference of the International Society of Magnetic Resonance in Medicine (ISMRM) 2016, Singapore

There are three journal publications performed during the third year:

- 1. World Airline Training Symposium (WATS) 2016 CAT Journal
- 2. European Airline Training Symposium (EATS) 2016 CAT Journal
- 3. Magnetic Resonance in Medicine (MRM) Journal

Other peer-reviewed publications were presented at German conferences:

- 1. Braunschweiger Symposium Automatisierungssysteme Assistenzsysteme und eingebettete Systeme für Transportmittel (AAET) 2016, Braunschweig, Germany
- 2. Tag der Ergonomie 2016, Friedrichshafen, Germany
- 3. Tagungsband 11. Berliner Werkstatt Mensch-Maschine-Systeme, 2015, Berlin, Germany

Other publications appeared in:

- 1. 1st International Workshop on Energy ManagemENt and Data ElaboRation (EMENDER), 2015, Ljubliana, Slovenia
- 2. Aachen Colloquium Automobile and Engine Technology, 2015, Aachen, Germany

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Finally, there are ongoing HoliDes works submitted to peer-reviewed conferences:

- 1. IEEE Transactions on Intelligent Transportation Systems
- 2. International Conference on Automotive User Interfaces and Interactive Vehicular Applications (AutoUI) 2016
- 3. ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS) 2016 (planned)

3 Newsletters

Newsletters represent dissemination materials directed to a wide public and contains high-level presentations the project results. They are meant to be public and downloadable from the HoliDes website, so that the interested reader can easily get in contact with the main topics considered within the project and related achievements updates.

During the third year of the project, two newsletter numbers have been released:

- Newsletter vol. 3, published on April 2016, containing articles about the Control Room AdCoS (Border Security and Energy Network) and advertises the foundation of the OSLC Human Factors User Group (http://holides.eu/sites/default/files/holides/files/contentfiles/newsletter/HoliDes_newsletter_3_0.pdf)
- Newsletter vol. 4, published on July 2016, focuses on the Health domain, containing the introductions to all the 6 Health AdCoS developed in the project. Moreover, the DivA AdCoS from the Aeronautic domain and the Platform Builder are presented as well. Finally, the demos that will be shown at the HoliDes final event are described (http://holides.eu/sites/default/files/holides/files/content-files/newsletter/holides_newsletter_4.pdf)

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HoliDes



Figure 1. First pages of HoliDes newsletter vol. 3 and vol. 4

The newsletter page on the HoliDes website is one of the "top contents" (see D10.2, Section "Website statistics").

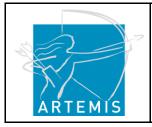
4 Videos

Several videos about HoliDes activities have been realized by the project partners during the third year. They have been collected by SNV and made available from the HoliDes website (<u>http://holides.eu/videos</u>).

In particular, the videos uploaded in the third year of the project have been:

 Adapted Automation AdCoS video by DLR, TWT and IAS (shown during the 2nd review meeting in Best)

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- Airplane cockpit evaluation with the Human Efficiency Evaluator, by OFF
- 4 tutorial videos about the Platform Builder, realized by ATO
 - "How can we log in the Platform Builder app?"
 - "How can we create a new HF-RTP instance in the Platform Builder?"
 - "Managing MTTs in the Platform Builder"
 - "How to view MTT usage statistics in the Platform Builder?"
- OSLC in the Doors NextGeneration Environment, part 1 and part 2, realized by EAD-DE-IW
- Adapted Assistance AdCoS video, realized by REL

Other videos at the time of writing (09.09.2015) are almost ready and are going to be uploaded as well:

- DivA AdCoS video, realized by TEC
- HoliDes project teaser, by SNV, to be ready by the final event

5 Events

Besides internal events organized for the technical meetings of the HoliDes project (organized both on a plenary and on a WP-specific basis), two main events were organized for the dissemination of the project during the third year:

- HoliDes technical and dissemination meeting, October 14th, 2015, Bilbao, Spain (see Section 6.1)
- HoliDes final event, September 29th, 2016, Friedrichshafen, Germany (see Section 6.2)

Many other internal events were organized on a per partner basis to present the project activities to potential customers to the aim of exploitation. Activities of this kind are reported in Annex I in the "Other dissemination activities" part.

5.1 HoliDes technical and dissemination meeting

TEC hosted the technical and dissemination meeting for the HoliDes project on October 14th 2015 at Parque Científico y Tecnológico de Bizkaia in Bilbao.

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	14 TH Octobe	r 2015	
HOliDes		SUBJECT	RESPONSIBLE
HOLISTIC HUMAN FACTORS AND SYSTEM DESIGN OF ADAPTIVE COOPERATIVE HUMAN-MACHINE SYSTEMS		Welcome. Coffee	
	9:00-9:30	CRYSTAL Project presentation	AVL
14 OCTOBER BILBAO-SPAIN 2015	9:30-10:00	HoliDes project presentation	OFFIS
TECNALIA	10:00-10:30	CP-SETIS project presentation	Safe TRANS
	10:30-11:00	SeaHorse project presentation	ESM
WWW.HOLIDES.EU DISSEMINATION PROJECT	11:00-11:30	Identification of shared goals discussion	EAD-UK, OFFIS
MEETING	11:30-12:00	Coffee	
	12:30-13:00	Human Factors Reference Technology Platform	EAD-UK
	13:00-13:30	Human Factor modellization and Interoperability	HFC, ATOS
	13:30-15:00	Lunch	
	15:00-15:30	Definition of shared dissemination activities	SNV
tecnalia)	15:30-16:30	Future dissemination and collaboration actions discussion	SNV, TECNALIA

Figure 2. Agenda of the HoliDes technical and dissemination meeting, October 2015, Bilbao

The meeting was organized to meet people from other EU projects concerning **Human Factors modeling and integration in Systems Engineering**, in order to introduce them to the HoliDes Human Factors Reference Technology Platform (HF-RTP) and discuss with them our project approach.

Three other projects joined the events:

- **CRYSTAL** (<u>http://www.crystal-artemis.eu/</u>) Critical System Engineering Acceleration. Crystal is an ARTEMIS Joint Undertaking project taking up the challenge to establish and push forward an Interoperability Specification (IOS) and a Reference Technology Platform (RTP) as a European standard for safety-critical systems.
- **CP-SETIS** (<u>http://cp-setis.eu/</u>) Towards Cyber-Physical Systems Engineering Tools Interoperability Standardization. CP-SETIS is a H2020 project supporting IOS Standardization by defining a concrete model for sustainable IOS Standardization Activities.
- **SeaHorse** (<u>http://www.seahorseproject.eu/</u>) Safety Enhancements in transport by Achieving Human Orientated Resilient Shipping

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Environment. SeaHorse is a Seventh Framework Programme project aimed at improving shipping safety through technology transfer from air transport to marine transport focusing on human factors problems in an innovative, integrated and multidisciplinary manner.

The identified shared goals includes Human Factor Modeling and Interoperability. The HoliDes Common Meta Model and Human Factor Ontology were presented. In particular, the HF ontology has been identified and proposed as the common vocabulary to be used when exchanging information between MTTs related to Human Factors. As to the RTP issues, the Bilbao meeting established an important link towards the alignment with the other projects dealing with IOS.



Figure 3. HoliDes technical and dissemination meeting with other EU projects

5.2 HoliDes Final Event

The **HoliDes Final Event** will be hosted by **Airbus Defence and Space** in Friedrichshafen, Germany on **Thursday, September, 29th**.

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SNV, OFF, EAD-DE-CAS and EAD-DE-IW closely collaborated for the organization with the great help of all the partners of the project both on the logistic side and on the guest involvement activities. Partners have been invited to involve external participants to the event so that it could represent a meeting point for exchanging ideas, networking and for showing the advancements produced by the partners within the project.

The public event will feature an interactive mix of keynotes (there will be **Prof. Klaus Bengler** from the Technical University of Munich and **Felix Mehler**, from Airbus Defence and Space, Vice President and Head of Engineering), a discussion panel about the future of Human Factors in System Engineering, guided tours through our exhibition of the project results, and includes time for discussion and networking in the sight of the beautiful Lake Constance.

The purpose is to provide insights about our application of Human Factors MTT for Healthcare, about assistance system development methods, techniques, tools and simulations in the Automotive and Aeronautics domain and about how Human Machine Systems of a Control Room benefit from our project results.

The event is conceived for a selected audience.

Different dissemination materials have been produced by SNV for the event, described in the following:

- Flyer
- Agenda
- Event highlights
- Invitation letter
- Brochure
- Gadget kit

5.2.1 Flyer of the event

The flyer of the event contains all the main information about it and is conceived for being printed on the need by partners for invitation purpose or to briefly advertise the event on web channels.

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HoliDes



Figure 4. Flyer of the HoliDes final event

5.2.2 Agenda

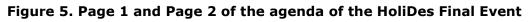
The agenda of the event has been delivered to the invited people and will be printed and delivered to the event participants at the registration desk of the event in Friedrichshafen together with the gadget kit.

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HoliDes



TIME	TOPIC	SPEAKERS
09:00	Participant registration and coffee	
09:30	Welcome and arrangements	Frank Jonat, Airbus Defence and Space
09:45	Introduction of HoliDes	Sebastian Feuerstack, OFFIS
10:00	Keynote talk	Prof. Klaus Bengler, Technical University of Munich
10:30	Overview of HoliDes results	Jens Gärtner, Airbus Group Innovations Linda Onnasch, HFC - Human Factors Consult
10:50	Introduction to the exhibition session	Simona Collina, Suor Orsola Benincasa University
11:00	Coffee break	
11:15	Exhibition session - part 1	
12:30	Lunch	
13.30	Exhibition session - part 2	
14:45	Coffee break	
15:00	Keynote talk	Felix Mehler, Airbus Defence and Space
15:30	Panel	Moderator: Martin Böcker, Airbus Defence and Space Panelists: Prof. Klaus Bengler, Technical University of Munich Prof. Gerrit Muller, Buskerud and Vestfold University College Felix Mehler, Airbus Defence and Space Andreas Lüdtke, OFFIS Jürgen Niehaus, SafeTRANS e.V.
16:15	Closing remarks	Sebastian Feuerstack, OFFIS
16:30	Final get-together bar and buffet	

Figure 6. Agenda of the HoliDes final event - detail

5.2.3 Invitation letter

The invitation letter has been provided to partners to invite guests to the final event. It is signed by the project coordinator and contains information about the project and about the event concept.

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5.2.4 Event highlights

This material contains an introduction to the project and the consortium as well as the main information about the event and about what will be shown there. Indeed, names and pictures of the HoliDes outcomes that will be presented during the exhibition sessions are included.

The document is conceived to help partners in informing invited people about the context and contents of the event in a quick and complete manner, both for each application domain (see Figure 7 for the Control Room example) and for the cross-domain aspects.

It is downloadable from the news on the HoliDes website about the final event at <u>http://www.holides.eu/sites/default/files/holides/files/content-files/articles/HoliDesFinalEvent_FlyerAgenda_0.pdf</u>.

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HoliDes



Figure 7. Event highlights – Control Room part, reported as an example

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5.2.5 Brochure

The brochure of the HoliDes final event is made by a presentation of the project and by the collection of the posters that will be shown there, realized by all the project partners. The brochure will be printed and inserted in the bag to be delivered to the event participants.

5.2.6 Gadget kits

To the participants of the final event a gadget kit will be delivered, made by:

- A customized bag
- A customized folder with white paper sheets inside
- A customized pen
- A customized powerbank
- The final event brochure
- A customized badge







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6 Contacts with European initiatives

As mentioned in Section 5.1, during the technical and dissemination meeting in Bilbao, project HoliDes has been introduced and presented to other European projects that could benefit from the knowledge of the HoliDes approach and achievements in the field of the RTP development and of the adaptation to the external context and to the operator's state:

- CRYSTAL, http://www.crystal-artemis.eu/
- CP-SETIS, http://cp-setis.eu/
- SeaHorse, <u>http://www.seahorseproject.eu/</u>

HoliDes results were introduced also to the **HFauto** European project (Human Factors of Automated Driving, <u>http://hf-auto.eu/</u>) in the context of an IFS initiative. HFauto is aimed at generating knowledge on Human Factors of automated driving towards safer road transportation. In particular, during the meetings held during 2016 in the IFS headquarter of Bron, France, presentation about the Virtual Human Centred Design (VHCD) Platform developed in HoliDes by IFS, INT and CVT and its application in the development of ADAS was provided to the HFauto project members.

Finally, thanks to the collaboration among the HoliDes partners, a new European project proposal has been developed, focusing onto the adaptation of the system to the emotional state of the user in Automotive, Aircraft and Air Traffic Control domains, named **EmpaTronic**. Many HoliDes companies are involved and are contributing to its development, and there is the plan of benefit from the HoliDes achievements in the development of the HF-RTP.

7 Contacts with standardization initiatives

In the third year, to establish a contact with the OSLC community, HoliDes (EAD-UK) started the OSLC Human Factors User Group (http://openservices.net/wiki/human-factors/) to the aim of discussing within the OSLC (Open Service for Lifecycle Collaboration) community the integration of lifecycle human factors tools in the system development process. The Human Factors User Group main goal is indeed to explore and to understand the integration scenarios that would improve traceability between human factors related work and traditional engineering data. Improved traceability will improve the human factor certification process and ultimately lead to 26/09/2016 Named Distribution Only Page 29 of 31 Proj. No: 332933



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products and services which are safer and more efficient from a human point of view. The Human Factors User Group is open to anybody willing to add valuable input for developing human factors scenarios. The participation of people beyond the Holides project is strongly desired and it has been encouraged by different WP1 initiatives and presentations. The group wiki is available at <u>http://open-services.net/wiki/human-factors/</u>.

As a further contact with standardization initiatives, EAD-DE-CAS presented the HoliDes achievements in the Control Room domain at the ETSI meeting of the Technical Committee Human Factors. The work carried out in HoliDes about the Border Security AdCoS and the proximity-based interaction technologies employed in that AdCoS have been appreciated by the Technical Committee and to be considered for eventual updates to the ETSI Guide on roadmaps for novel interaction technologies (ETSI EG 202 848 V1.1.1 (2011-02), www.etsi.org).

8 Website updates

Two new website sections have been created to better communicate the project information:

- Posters (<u>http://holides.eu/cat/26</u>)
- Results (http://www.holides.eu/cat/27)

8.1 Posters

Posters realized during the project by the partners have been collected by SNV and made available from the HoliDes website, in particular from a dedicated page (<u>http://holides.eu/cat/26</u>), so that website visitors can get sketched technical details about the works they are interested in.

8.2 Results

The "Results" page on the HoliDes website makes possible to access via web the pages dedicated to the different works carried on during the project (http://www.holides.eu/cat/27). They are conceived for a rapid consultation of the project outcomes by the website visitors.

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9 Website statistics

Website statistics of the third year are reported in D10.2, Section 4.1. They are briefly reported in the following table, to see the trend over the three years of the project.

Metrics	Planned Success criteria(Year 3)	Measure (Year 3)	Measure (Year 2)	Measure (Year 1)	Criteria verified
Website visitors	According to our experience in previous research projects, an average of 2000 visits per year would be a positive result	4.005	5.576	2.156	~
Average time on site	At least 40% of users spending more than 1:30 minutes on the site	02:07	01:43	02:28	~
Visits per country	Visits from more than 40 countries	125	111		\checkmark

While there is a decrease in the number of the visits, even if still over the threshold, there is an increase in the average time spent on the website as well as an increment of the number of the visiting countries.

10 Dissemination activities per partner

All project partners contributed to the dissemination activities carried on in the third year. The activities performed by each partner are removed for confidentiality issues.

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HoliDes Year 3 Publications

Project Number:	332933
Classification:	Confidential
Work Package(s):	WP1
Milestone:	M5
Document Version:	V5.0
Issue Date:	September 2016
Document Timescale:	Project Start Date: October 1, 2013
Start of the Document:	Month 16
Final version due:	Month 23
Deliverable Overview:	Main document:D10.5 - HoliDesFinalExploitationandDisseminationPlan <confidential></confidential>
Compiled by:	Roberta Presta - SNV
Authors:	Roberta Presta - SNV
Reviewers:	Nacho Gonzalez (ATO), Simona Collina (SNV)
Technical Approval:	Jens Gärtner, Airbus Group Innovations
Issue Authorisation:	Sebastian Feuerstack, OFF

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	DISTRIBUTION LIST	
Copy type ¹	Company and Location	Recipient
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¹ Copy types: E=Email, C=Controlled copy (paper), D=electronic copy on Disk or other medium, T=Team site (AjaXplorer)

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	RECORD OF REVISION	
Date (DD.MM.JJ)	Status Description	Author
09.09.2016	List of publications added to 10.5	R. Presta

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1 HoliDes-related dissemination activities in period 3 - Oct 2015 to Sep 2016

1.1 List of scientific (peer reviewed) publications

LIST OF SC	LIST OF SCIENTIFIC (PEER REVIEWED) PUBLICATIONS										
Partner	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers ² (if available)	ls open access ³ provided?	
PAPER											
CAS- UK	Implementation of Human System Integration into the System Engineering Lifecycle and Model Based System Engineering at Airbus Defence and Space	Robert Sharples	Applied Human Factors and Ergonomics Conference 2016	26 th August to 1 st September 2016	ScienceDirect	Orlando, Florida, USA	2016	Complete paper	To be released	Yes	
DLR	A critical path modelling GOMS approach for decomposing lane changes on a two- lane highway	Käthner D, Andree A, Drewitz U, and Ihme K	2015 Annual Conference of the Human Factors and Ergonomics Society Europe Chapter	1416. October		Groningen, Netherlands	2015			no	

 ² A permanent identifier should be a persistent link to the published version full text if open access or abstract if article is pay per view) or to the final manuscript accepted for publication (link to article in repository).
³ Open Access is defined as free of charge access for anyone via Internet. Please answer "yes" if the open access to the publication is already

established and also if the embargo period for open access is not yet over but you intend to establish open access afterwards.





Partner	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers ² (if available)	ls open access ³ provided?
DLR	Should my car drive as I do? What kind of driving style do drivers prefer for the design of automated driving functions?	Griesche, S.; Nicolay, E.; Assmann, D.; Dotzauer, M.; Käthner, D.	17 Braunschweiger Symposium Automatisierungssyst eme, Assistenzsysteme und eingebettete Systeme für Transportmittel (AAET)	1011. February 2016	ITS automotive nord e.V.,	Braunschwe ig, Germany	2016	pp. 185-204		yes
DLR	A CPM-GOMS-model of lane changes on highways	David Käthner, Klas Ihme, Meike Jipp	58th Conference of Experimental Psychologists	21-23 March	PABST SCIENCE PUBLISHERS Lengerich	Heidelberg, Germany	2016	100		No
EAD- DE- CAS	Increasing control room effectiveness and security through proximity-based interaction technologies	M. Boecker	Proceedings fo the 7 th International Conference on Applied Human Factors and Ergonomics	AHFE 2016 27-31 July 2016	Springer, Series: Advances in Intelligent Systems and Computing	Orlando, Florida, USA	2016	not yet available	not yet available	Science Direct
ENA	Designing, developing and verifying interactive components iteratively with djnn	S. Chatty, M.Magnaudet, D. Prun, S. Conversy, S. Rey, M. Poirier	ERTS 2016 Embedded Real Time Software and Systems	27-29 january 2016		Toulouse - France	2016	pp. 743751	Not available	yes
HFC	Break it down! A	Onnasch, Bürglen, Tristram, Kolrep	The 32nd EAAP conference	-	Not published, conference	Portugal	2016	-	Not published, conference will	NO





LIST OF SC	IENTIFIC (PEER REVIEWED) P	UBLICATIONS								
Partner	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers ² (if available)	ls open access ³ provided?
	practitioner's software tool for Human Factors Task Analysis and Human Error Identification		proceedings		will be in September 2016				be in September 2016	
HFC, TEC, ATO, EAD- UK	Introducing the Human Factors Reference Technology Platform for efficient system development	Linda Onnasch, Sonia Bilbao, Jordi Fonoll, Ian Giblett	The 32nd EAAP conference proceedings	-	Not published, conference will be in September 2016	Portugal	2016	-	Not published, conference will be in September 2016	
TEC, SNV, HON	Cognitive Workload Classification using Eye-tracking and EEG Data	Jesus L. Lobo, Javier Del Ser, Flavia De Simone, Roberta Presta, Simona Collina, Zdenek Moravek	FullpaperinProceedingsHCI-Aero'16:InternationalConferenceConferenceonHuman-ComputerInteractionInteractioninAerospace 2016.	14th-16th September, 2016	HCI-Aero 2016	Paris, France	2016	N/A	N/A	No
IAS	Semantic Situation Assessment and Maneuver Prediction for Highly Automated	M. Kraehling, N. Holst, Dr. U. Lages, Prof. Dr. R. Rojas	ITS World Congress	22nd		Bordeaux, France	2015			no

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LIST OF SC	IENTIFIC (PEER REVIEWED) P	UBLICATIONS								
Partner	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers ² (if available)	Is open access ³ provided?
	Driving									
IAS	Driver Interaction in Highly Automated Driving	M. Kraehling, A. Wurl, Dr. U. Lages, Prof. Dr. R. Rojas	ITS World Congress	22nd		Bordeaux, France	2015			no
TRS, OFF, LFT	Adaptive Transition Training	Rister, F., Osterloh, JP., Luedtke, A., Helmke, F.	World Airline Training Symposium 2016 CAT-Journal	20.04.2016	Halldale	Orlando/Lon don	2016	TBD	TBD	No
TRS, OFF, LFT	TrainingSuite Adaptive Training Research	Rister, F., Osterloh, JP., Luedtke, A., Helmke, F.	European Airline Training Symposium 2016 CAT Journal	02.11.2016	Halldale	Berlin/Lond on	2016	TBD	TBD	No
OFF	Tool-supported Comparative Visualizations to Reveal the Difference between 'What has been Designed' and 'How it is Perceived' for Monitoring Interface Design	B. Wortelen and S. Feuerstack	IEEE International Multi-Disciplinary Conference on Cognitive Methods in Situation Awareness and Decision Support (CogSIMA), 2016	21-25 March 2016,	IEEE Press	San Diego, USA	2016	pp. 192 - 197	978-1-5090- 0631-1	No
OFF	Engineering Automotive HMIs that are optimized for Correct and Fast Perception	M. Ostendorp, S. Feuerstack, T. Friedrichs, and A. Lüdtke	ACM SIGCHI Symposium on Engineering Interactive Computing Systems 2016	21-24 June, 2016	ACM	Brussels, Belgium	2016	pp. 293-298	doi>10.1145/29 33242.2935869	No
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LIST OF SC	IENTIFIC (PEER REVIEWED) P	UBLICATIONS								
Partner	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers ² (if available)	Is open access ³ provided?
OFF	AM-DCT: A Visual Attention Modeling Data Capturing Tool for Investigating Users' Interface Monitoring Behavior	S. Feuerstack and B. Wortelen	Proceedings of the working conference on Advanced visual interfaces	June 21 – 24 2016	ACM	Bari, Italy, 2016	2016	Pages 252- 255	ISBN: 978-1- 4503-4131-8	No
TRS, OFF	Model-based Pilot Training	Rister, F., Osterloh, JP., Luedtke, A.,	HFES-Proceedings of 2015 International Annual Meeting	29.10.2015	Human Factors and Ergonomic Society	Los Angeles	2015	N/N	TBD	No
TRS, OFF	Learning Theories in Algorithms for Flight Deck Modelling	Rister, F., Osterloh, JP., Luedtke, A.,	EAAP Conference 2016	26.09.2016	Hogrefe	Berlin/Lisbo n	2016	TBD	TBD	No
TWT	Detektion der kognitiven Ablenkung des Fahrers aus Videoaufnahmen des Gesichts?	Borchers, S., Thurlings, M., Martin, D., Hennig, H., Zangmeister, T., Victor Fäßler, V.	Tagungsband 11. Berliner Werkstatt Mensch-Maschine- Systeme,				2015	pp 209-214.		
UMC	Optimal control design of turbo spin- echo sequences with applications to parallel-transmit systems.	Sbrizzi	Magnetic Resonance in Medicine		Wiley		2016			
UMC	Database Construction for Local SAR Prediction:	Meliado	Proceeding of the 2016 Annual Conference of the				2016			
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LIST OF SC	IENTIFIC (PEER REVIEWED) P	UBLICATIONS								
Partner	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers ² (if available)	Is open access ³ provided?
	Preliminary Assessment		International Society of Magnetic Resonance in Medicine							
EAD- DE- CAS	Der Einsatz von sensorbasierten Interaktionstechnologi en zur Erhöhung der Effektivität und Sicherheit von C2 Operateuren – Ergebnisse aus dem ARTEMIS Projekt HoliDes	M. Böcker	Tag der Ergonomie 2016	10-11 March 2016	ECN Ergonomie Kompetenz Netzwerk e. V.	Friedrichsha fen, Germany	2016	Poster presentation		No
BUT	Implicit Gestures Recognition and Gaze Estimation for Safer Aeronautic Cockpit	Herout, Behúň, Pavelková, Morávek	IEEE Transactions on Intelligent Transportation Systems		IEEE		Submitted 2016			No
OFF	Theater-system Technique and Model-based Attention Prediction for the Early Automotive HMI Design Evaluation	S. Feuerstack, B. Wortelen, C Kettwich, A. Schieben	AutoUI	October 24 – 26, 2016		Ann Arbor, MI, USA,	Submitted 2016			No
ENA	Implementing and Using Synchronous	D. Prun, M.Magnaudet, S.	Planned for Engineering				Planned for Engineering			
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Partner	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers ² (if available)	Is open access ³ provided?
	Observer to Improve the Development of Interactive Softwares	Chatty	Interactive Computing Systems (EICS) 2017				Interactive Computing Systems (EICS) 2017			
TWT	Detection of cognitive distraction during driving.	Thurlings, Cornelsen, Cohen, Ludwig, Frotscher, Faessler					In preparation			

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1.2 List of other publications/articles

LIST OF OT	HER PUBLICATIONS/A	RTICLES								
Partner	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers ⁴ (if available)	Is/Will open access⁵ provided?
• C	THER ARTICLES									
IRN, REL, SNV	A system for the emergency management in energy network control rooms	Elisa Landini, Caterina Calefato, Roberta Presta, Simona Collina	Proceedings of the 1st International Workshop on Energy ManagemENt and Data ElaboRation (EMENDER)	-	-	-	2015	-	-	no
ТАК	Development and Evaluation of an Adaptive HMI for Semi-Autonomous Driving.	Weller, Gert Essers, Stefanie Hoefer, Simon.	Aachener Kolloquium Fahrzeug- und Motorentechnik [Aachen Colloquium Automobile and Engine Technology].		Pischinger, S. Eckstein, L. RWTH Aachen, Institute for Combustion	Aachen	2015	1473 -1484		

⁴ A permanent identifier should be a persistent link to the published version full text if open access or abstract if article is pay per view) or to the final manuscript accepted for publication (link to article in repository).

⁵ Open Access is defined as free of charge access for anyone via Internet. Please answer "yes" if the open access to the publication is already established and also if the embargo period for open access is not yet over but you intend to establish open access afterwards.

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					Engines and Institute for Automotive Engineering					

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